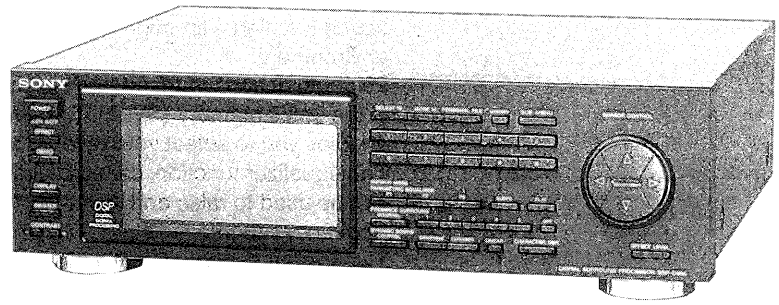
SDP-D905

SERVICE MANUAL

AEP Model
UK Model
E Model



This set is a Digital Surround
Processor block of the Following models.
LBT-D905CD

SPECIFICATIONS

Frequency response	2 Hz to 20 kHz ±0.5 dB (with digital input)
Total Harmonic Distortion	Less than 0.008% (with digital input)
Signal-to-noise ratio	More than 110 dB (with digital input)

General

Power requirement	240V AC, 50/60 Hz (UK model) 110V-120V/220-240V AC (E, Saudi Arabia models) 220-230V AC, 50/60 Hz (AEP, Germany, Italian models)
Power consumption	18W (AEP, Germany, Italian, UK models) 19W (E, Saudi Arabia models)
AC outlet	1 unswitched, 100W
Dimensions	Approx. 355 × 107 × 315.5 mm (w/h/d, including projections)
Weight	Approx. 3.6 kg
Supplied accessaries	Audio connecting cords (2) Optical cord (1)

Design and specifications subject to change without notice.

DIGITAL
SURROUND PROCESSOR
SONY®

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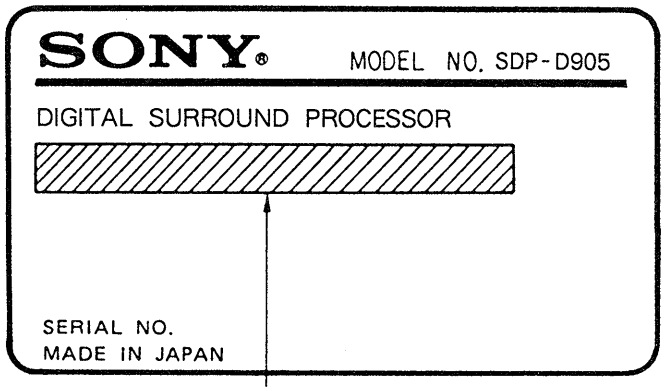
MODEL IDENTIFICATION

– Specification Label –



AEP, Germany, Italian models : AC220 – 230V~50/60Hz

UK model : AC240V~50/60Hz

E, Saudi Arabia models : AC110 – 120V/220 – 240V ~50/60Hz

Using the Sound Manipulation Features

This unit is equipped with three sound adjustment functions – an equalizer function, a surround function and a dynamic sound function – for improving the sound in your listening environment.
20 combinations of these three functions are already preset in the unit's memory (SELECT 10 and MORE 10) and this enables you to select your favorite sound field easily.
The equalizer function, called Digital Parametric Equalizer, can be used to raise and lower the levels of specific frequency ranges.
The surround function, called Digital Presence Surround, can be matched to the music genre or source to effectively reproduce a feeling of "being there."
The dynamic sound function, called Digital Dynamic Sound, can be used to give a powerful feeling to music when listening at low volume levels and also reduce strident noise.
Making full use of these three functions allows you to create a variety of different sounds and effets and to maximize your music listening enjoyment.

Using the Sound Manipulation Features

Obtaining Digital Surround Processor Effects

Press EFFECT so that the indicator is turned on.
Digital surround processor effects can not be obtained if the indicator is not turned on.
Compare the results by switching EFFECT on and off.
With the indicator turned on, sounds with the processor effects can also be recorded on a tape in a cassette deck.

Adjusting the Effect Level

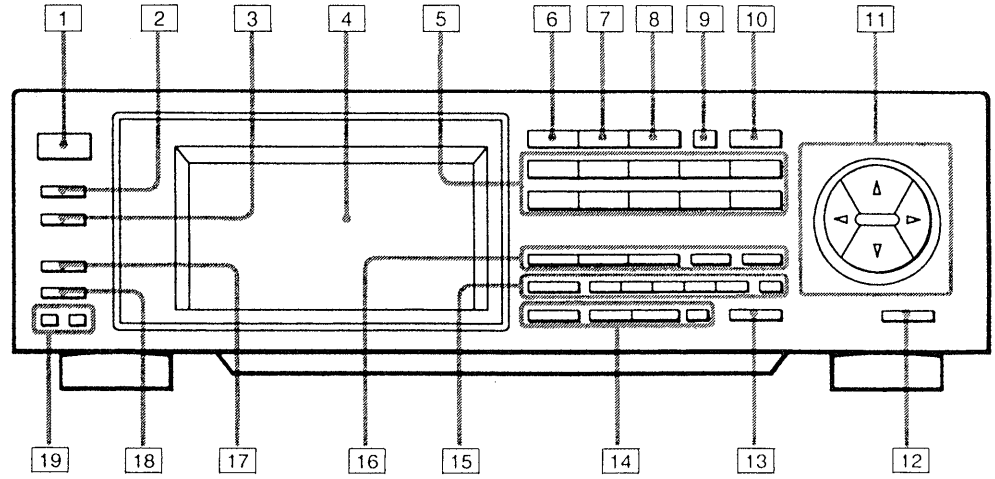
The degree of the processor effects on a selected source can be adjusted within the range of 0% to 100% in 20% intervals.

Press EFFECT LEVEL so that "EFFECT LEVEL" is indicated on the display, and then press ▲/► of the CURSOR CONTROL buttons to increase the effect level or ▼/◄ to decrease it.

SECTION 1
GENERAL

This section is extracted from instruction manual.

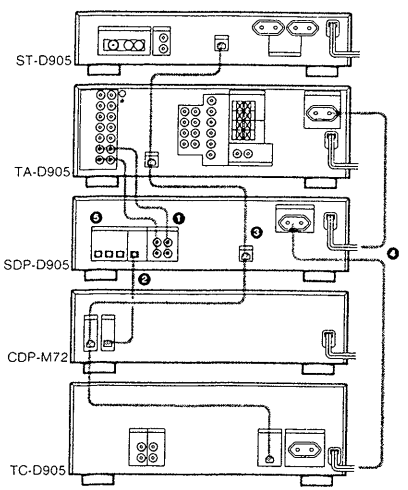
Location of Controls



Refer to the page indicated in ●.

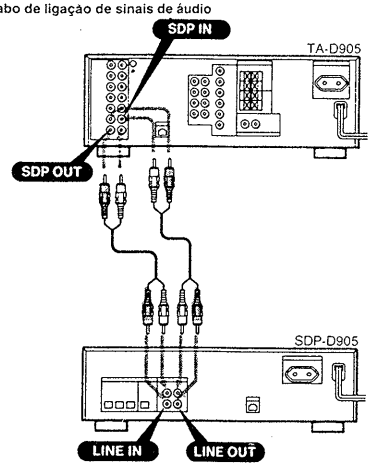
1 POWER switch
2 EFFECT button and indicator ⑩
3 DEMO button ⑨
4 Display
5 Numeric buttons used with SELECT 10/MORE 10/PERSONAL FILE/SUB MENU.
6 SELECT 10 button and indicator ⑭
7 MORE 10 button and indicator ⑭
8 PERSONAL FILE button and indicator ㉘
9 MEMORY button ㉘, ㉚
10 SUB MENU button ㉜
11 CURSOR CONTROL buttons ⑩, ⑲, ㉗
12 EFFECT LEVEL button and indicator ⑩
13 CHARACTER EDIT button and indicator ㉚
14 DYNAMIC SOUND buttons
CONTROL button and indicator ㉖
COMPRESS button ㉖
EXPANDER button ㉖
LINEAR button ㉖
15 PRESENCE SURROUND buttons
CONTROL button and indicator ㉒
Numeric buttons ㉓
OFF button ㉒
16 PARAMETRIC EQUALIZER buttons
F1/F2/F3 (frequency) buttons and indicators ⑱
SLOPE button ⑱
FLAT button ⑳
17 DISPLAY button ⑫
18 DIMMER button ⑫
19 CONTRAST +/− buttons ⑫

Installation



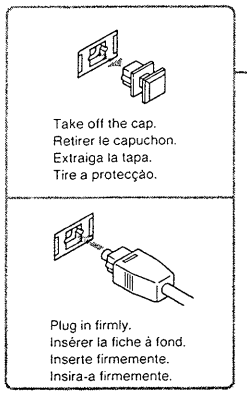
Installation

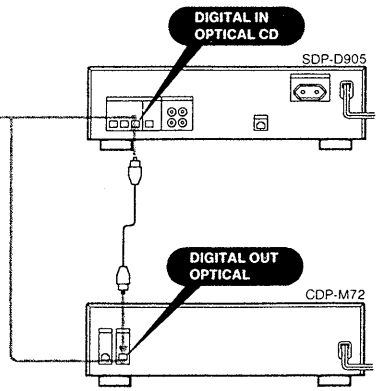
1 Audio connecting cord
Cordon de liaison audio
Cable conector de audio
Cabo de ligaçao de sinais de áudio



Instalación

2 Optical cord
Câble optique
Cable óptico
Cabo óptico





Instalação

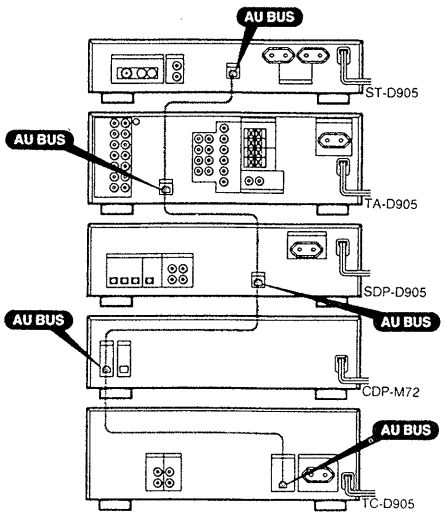
3 **Control cord (supplied with ST-D905)**
Câble de commande (fourni avec le ST-D905)
Cable de control (suministrado con el ST-D905)
Cabo de controle (fornecido com o ST-D905)

This connection allows you to control this unit with the remote commander supplied with ST-D905.

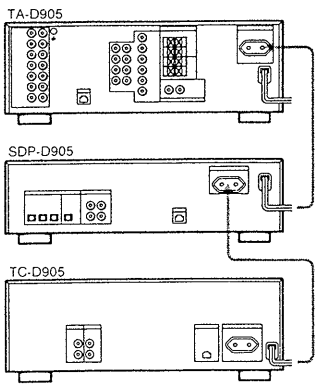
Ce branchement vous permet de pilcter l'appareil avec la télécommande accompagnant le ST-D905.

Esta conexión le permitirá controlar esta unidad con el telemando suministrado con el ST-D905.

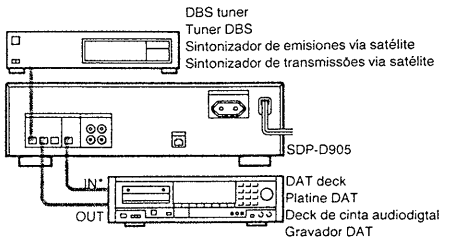
Esta ligação possiblilita o controle deste aparelho com o telecomando fornecido com o ST-D905.



4 **AC power cords**
Cordons d'alimentation secteur
Cables de alimentación
Cabos de alimentação CA

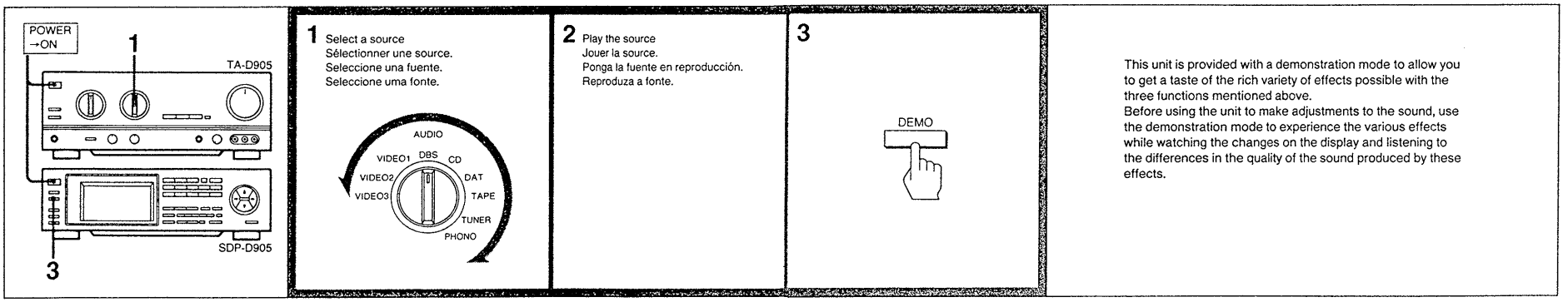


5 **Optional equipment connected with optical cords**
Equipement en option raccordé avec des câbles optiques
Equipos opcionales conectados con cables ópticos
Equipamento opcional ligado com cabos ópticos.



- Digital surround processor effects can not be recorded with this connection.
- Les effets produits par le traitement numérique de l'ambiance ne peuvent pas être enregistrés par cette connexion.
- Los efectos del procesador perimétrico digital no podrán grabarse con esta conexión.
- Os efeitos de processamento digital perimétricos não poderão ser gravados com esta ligação.

Demonstration Mode



This unit is provided with a demonstration mode to allow you to get a taste of the rich variety of effects possible with the three functions mentioned above.
Before using the unit to make adjustments to the sound, use the demonstration mode to experience the various effects while watching the changes on the display and listening to the differences in the quality of the sound produced by these effects.

To stop the demonstration mode
Press DEMO again or any button other than the POWER switch.

Arrêt du mode démonstration
Appuyer de nouveau sur la touche DEMO ou sur toute autre touche que l'interrupteur d'alimentation POWER.

Para cesar el modo de demostración
Vuelva a presionar DEMO o cualquier otra tecla, excepto el interruptor POWER.

Para interromper o modo de demonstração
Pressione DEMO novamente ou qualquer outra tecla, excepto POWER.

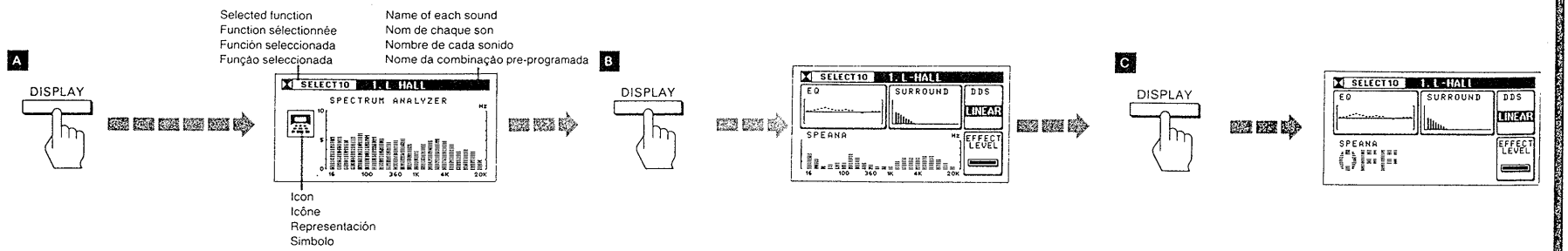
Using the Sound Manipulation Features

Utilisation des caractéristiques de manipulation du son

Empleo de las funciones de manipulación del sonido

Características do processamento de sinais

Changing the Displayed Information — Modification de l'affichage d'informations — Cambio de la información visualizada — Alteração das informações indicadas



Each time DISPLAY is pressed, the display changes to show the following information:

- A The spectrum analyzer is enlarged.
- B All of the digital surround processor effects are diaplayed. It is convenient to check the processor effects while adjusting sound.
- C The same as the display of B except that the spectrum analyzer is not displayed at this time.

Chaque fois que l'on appuie sur la touche DISPLAY, l'affichage change pour montrer les informations suivantes:

- A L'analyseur de spectre augmente.
- B Tous les effets de traitement numérique de l'ambiance sont affichés.
  Il est pratique de vérifier ces effets en réglant le son.
- C Même affichage que pour B, toutefois l'analyseur de spectre n'apparaît pas.

Cada vez que presione DISPLAY, la visualización cambiará para mostrar la información siguiente:

- A Se agrandará el analizador de espectro.
- B Se visualizarán todos los efectos del procesador perimétrico digital.
  Muy útil para comprobar los efectos del procesador durante el ajuste del sonido.
- C Igual que la visualización de B, excepto que en este caso no se visualizará el analizador de espectro.

A cada pressionar de DISPLAY, o mostrador altera a indicação, resultando-se na exposição das seguintes informações:

- A Cobertura maior no analisador de espectro.
- B Indicação de todos efeitos de processamento digital perimétrico.
  Conveniente para verificar os efeitos de processamento enquanto ajusta o som.
- C O mesmo da indicação B, sem a indicação do analisador de espectro.

Changing the Brightness and Contrast of the Display

To change the brightness
Press DIMMER so that the brightness switches in 2 stages.

To change the contrast
Press CONTRAST +/−.

If the DEMO button is pressed
The DIMMER button will be disengaged in demonstration mode. When the demonstration is stopped, it will be engaged again.

Notes on the display
- *The Liquid Crystal Display (LCD), which is designed to be viewed straight on, is used for this unit. Consequently the color of the display changes according to the angles from which the display is viewed.*
- *A change in temperature may change the contrast level of the display.*
  If this occurs, adjust the contrast level by pressing CONTRAST +/−.

Modification de la luminosité et du contraste de l'affichage

Modification de la luminosité
Appuyer sur la touche DIMMER, la luminosité passe au degré suivant.

Modification du contraste
Appuyer sur la touche +/−.

Enclenchement de la touche DEMO
La touche DIMMER est libérée en mode de démonstration, mais lorsque ce mode est de nouveau hors service, l'atténuateur est de nouveau enclenché.

Remarques concernant l'affichage
- *Un affichage à cristaux liquides (LCD), conçu pour une lecture de face, est utilisé dans cet appareil; par conséquent la couleur de celui-ci change suivant l'angle dans lequel vous le regardez.*
- *Un changement de la température peut modifier la luminosité de l'affichage. Dans ce cas, la réajuster en appuyant sur la touche CONTRAST +/−.*

Cambio del brillo y el contraste del visualizador

Para cambiar el brillo
Presionando DIMMER podrá cambiar el brillo en 2 etapas.

Para cambiar el contraste
Presione CONTRAST +/−.

Si presiona la tecla DEMO
La tecla DIMMER se desactivará en el modo de demostración. Cuando cese la demostración, volverá a activarse.

Notas sobre el visualizador
- *Para esta unidad se emplea un visualizador de cristal líquido (LCD) diseñado para verse perpendicularmente. Por consiguiente el color del visualizador cambiará de acuerdo con el ángulo que el que se mire.*
- *Un cambio de temperatura pude producir el cambio del brillo del visualizador. Cuando ocurra esto, cambie el brillo presionando CONTRAST +/−.*

Ajuste do brilho e do contraste do mostrador

Para ajustar o brilho
Pressione DIMMER, e seleccione uma das duas intensidades de brilho.

Para ajustar o contraste
Pressione CONTRAST +/−.

Se pressiona DEMO
A tecla DIMMER é desactivada no modo de demonstração.
Terminada a demonstração, a tecla é activada novamente.

Notas sobre a indicação
- *O visor de cristal líquido (LCD), projectado para ser visto de um ângulo recto, é utilizado neste aparelho. Devido a esta característica, a cor varia de acordo com o ângulo de visão.*
- *Uma mudança na temperatura poderá alterar o nível de contraste do mostrador.*
  Neste caso, ajuste o nível de contraste com CONTRAST +/−.

Adjusting the Sound with Preset Settings – SELECT 10/MORE 10

This function allows you to adjust the sound with 20 preset combinations of equalizer, surround, and dynamic sound effects to enable you to set the sound quality to suit your taste and listening conditions.

Réglage du son avec les préréglages – SELECT 10/MORE 10

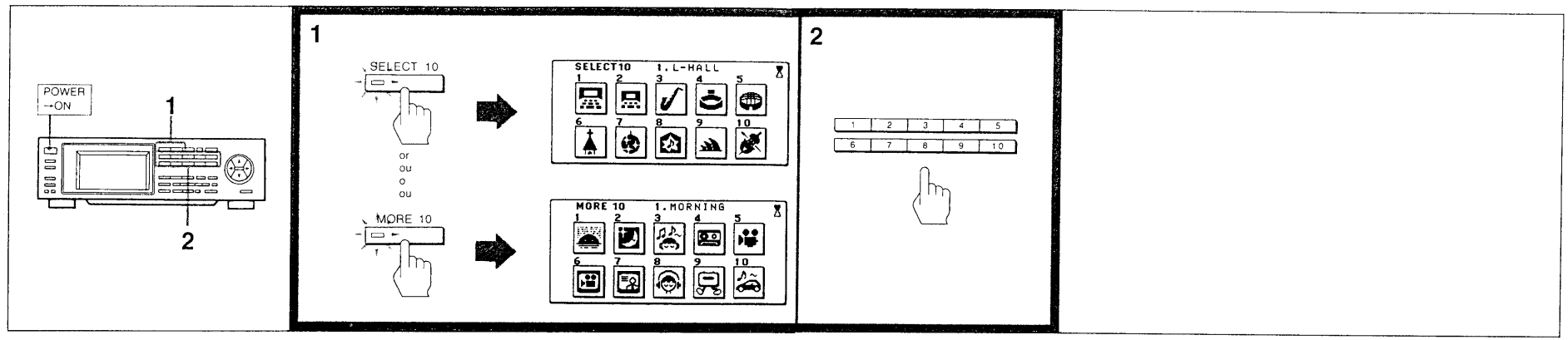
Cette fonction vous permet de régler le son à l'aide de 20 combinaisons de préréglage des effets produits par l'égaliseur, le traitement de l'ambiance et les basses dynamiques pour adapter la qualité du son à votre goût particulier et à votre environnement.

Ajuste del sonido con ajustes memorizados – SELECT 10/MORE 10

Esta función le permitirá ajustar el sonido con 20 combinaciones de efectos de ecualización, sonido perimétrico, y sonido dinámico para que pueda ajustar la cualidad del sonido a su gusto o de acuerdo con las condiciones de escucha.

Ajustes pré-programados – SELECT 10/MORE 10

Esta função possibilita o ajuste do som com 20 combinações de ajustes no equalizador, processador perimétrico, e compressor/expansor digital. Ajuste o som de acordo com suas preferências e o ambiente do local de escuta.



SELECT 10 Preset Settings

1 **L-HALL**
Gives the atmosphere of a large hall of which the seating capacity is more than 2000.

2 **S-HALL**
Gives the atmosphere similar to an instrumental recital held in a small hall.

3 **JAZZ CLUB**
Reproduces stressed sounds which are most likely created in a location surrounded with solid walls.

4 **STADIUM**
Gives the atmosphere similar to a performance held in a stadium.

5 **ARENA(GYM)**
Gives the atmosphere similar to a live concert held in a gym.

6 **CHURCH**
Produces natural echo most likely created in surroundings such as in a church.

7 **DISCO**
Reproduces disco-like sounds most likely created in surroundings with a solid floor and walls.

(to be continued)

Préréglages SELECT 10

1 **L-HALL**
Rend l'atmosphère d'un grand hall dont la capacité dépasse 2000 places.

2 **S-HALL**
Rend l'atmosphère d'un récital de musique instrumentale dans une petite salle de concert.

3 **JAZZ CLUB**
Reproduit les sons accentués d'un orchestre de jazz dans un local construit de murs épais.

4 **STADIUM**
Reproduit l'atmosphère sonore d'un stade.

5 **ARENA (GYM)**
Rend l'atmposphère musicale d'un concert se tenant dans un stade couvert.

6 **CHURCH**
Produit l'écho naturel d'une église.

7 **DISCO**
Rend des sonorités similaires à l'ambiance créée par un lieu au sol et murs résistants.

(à suivre)

Ajustes memorizados en SELECT 10

1 **L-HALL (Sala grande)**
Ofrece la atmósfera de una sala grande con una capacidad de más de 2000 asientos.

2 **S-HALL (Sala pequeña)**
Ofrece una atmósfera similar a la de un recital instrumental celebrado en una sala pequeña.

3 **JAZZ CLUB (Club de jazz)**
Reproduce el sonido tenso que suele producirse en un lugar rodeado por paredes sólidas.

4 **STADIUM (Estadio)**
Ofrece una atmósfera similar a la de una actuación celebrada en un estadio.

5 **ARENA (GYM) (Gimnasio)**
Ofrece una atmósfera similar a la de un concierto en vivo celebrado en un gimnasio.

6 **CHURCH (Iglesia)**
Produce el eco natural que suele crearse en ambientes tales como una iglesia.

7 **DISCO (Discoteca)**
Reproduce sonidos semejantes a los de una discoteca que suelen crearse en ambientes con piso y paredes sólidos.

(continúa en la página siguiente)

Ajustes pré-programados SELECT 10

1 **L-HALL**
Simula o ambiente de uma grande sala de concertos com capacidade superior a 2000 pessoas.

2 **S-HALL**
Simula o ambiente de um recital de música instrumental numa pequena sala de concertos.

3 **JAZZ CLUB**
Reproduz sons nítidos que provavelmente seriam criados em cómodos com paredes sólidas.

4 **STADIUM**
Simula um ambiente similar a concertos ao vivo num estádio.

5 **ARENA**
Simula o ambiente similar a concertos ao vivo em sala de desportos.

6 **CHURCH**
Produz o eco natural que provavelmente seriam criados numa igreja.

7 **DISCO**
Reproduz características de músicas do género disco, os sons que provavelmente seriam criados em locais com paredes e pisos sólidos.

(continua)

Adjusting the Sound with the Digital Parametric Equalizer

This feature allows you to adjust the sound by raising or lowering the levels of specific frequency ranges.

Réglage du son avec l'égalisation paramétrique numérique

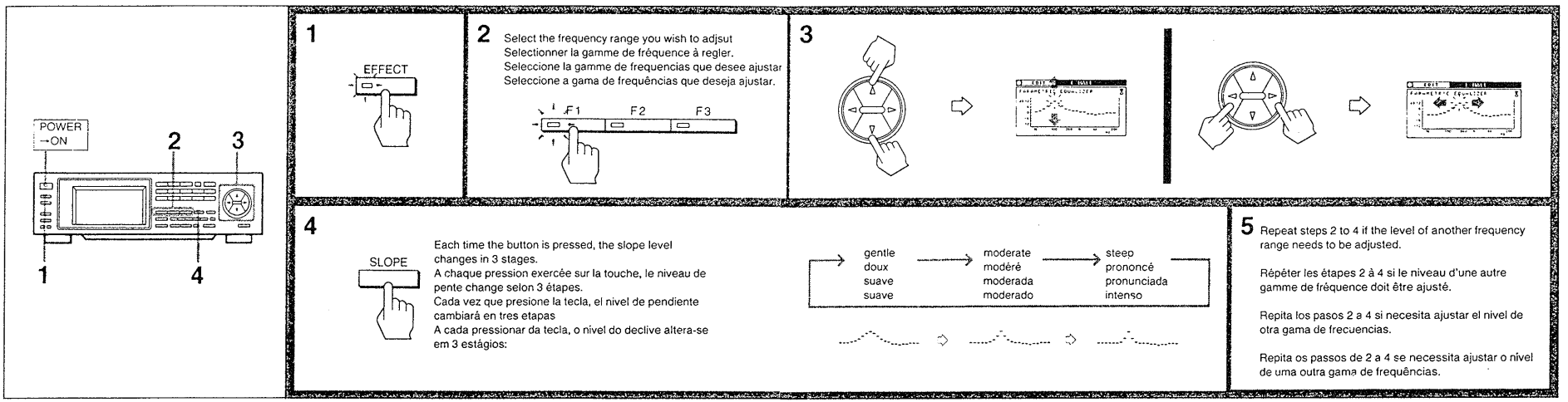
Cette caractéristique vous permet de régler le son en augmentant ou diminuant le niveau de gamme de fréquence particulière

Ajuste del sonido con el ecualizador paramétrico digital

Esta función le permitirá ajustar el sonido aumentando o disminuyendo los niveles de gamas de frecuencias especificas.

Ajustes com o equalizador paramétrico digital

Esta característica ajusta o som mediante o reforço ou a atenuação de uma dada gama de frequências.



Approximately 10 seconds after the adjustment, the normal indication will resume.
To restore it more quickly, press the frequency button (F1/F2/F3) which is illuminated.

In step 2

Button	Frequency range
F1	Low range
F2	Middle range
F3	High range

Environ 10 secondes après le réglage, l'indication originale revient. Appuyer sur la touche de fréquence (F1/F2/F3) illuminée pour la rétablir plus rapidement.

A l'étape 2

Touche	Gamme de fréquence
F1	Gamme basse fréquence
F2	Gamme moyenne fréquence
F3	Gamme haute fréquence

Aproximadamente 10 segundos después del ajuste, se reanudará la indicación normal. Para reanudarla con mayor rapidez, presione la tecla de frecuencia (F1/F2/F3) que esté encendida.

En el paso 2

Tecla	Gama de frecuencias
F1	Gama baja
F2	Gama media
F3	Gama alta

Cerca de 10 segundos após o ajuste, retorna-se a indicação normal. Para obter mais rapidamente a indicação normal, pressione a tecla de frequências (F1/F2/F3) que estiver iluminada.

No passo 2

Tecla	Gama de frequências
F1	Gama baixa
F2	Gama média
F3	Gama alta

Note
If two crests or troughs on the equalizer curve are combined and the peak of the resulting crest or trough exceeds ± 12 dB, "OVER" will be indicated in the display.

Remarque
Si les crêtes et creux de la courbe d'égalisation se combinent de telle sorte que la crête ou le creux dépasse ± 12 dB, l'indication "OVER" est affichée.

Nota
Si dos crestas o senos de la curva de ecualización se combinan y el pico de la cresta o el seno resultante sobrepasa los ± 12 dB, en el visualizador se indicará "OVER".

Nota
Se dois picos na curva de equalização forem combinados, e o pico resultante exceder ± 12 dB, OVER será indicada no mostrador.

Using the Digital Presence Surround Effects

By using this unit's various surround effects, you can create a feeling of presence similar to being in a concert hall or stadium.

Utilisation des effets numériques d'ambiance

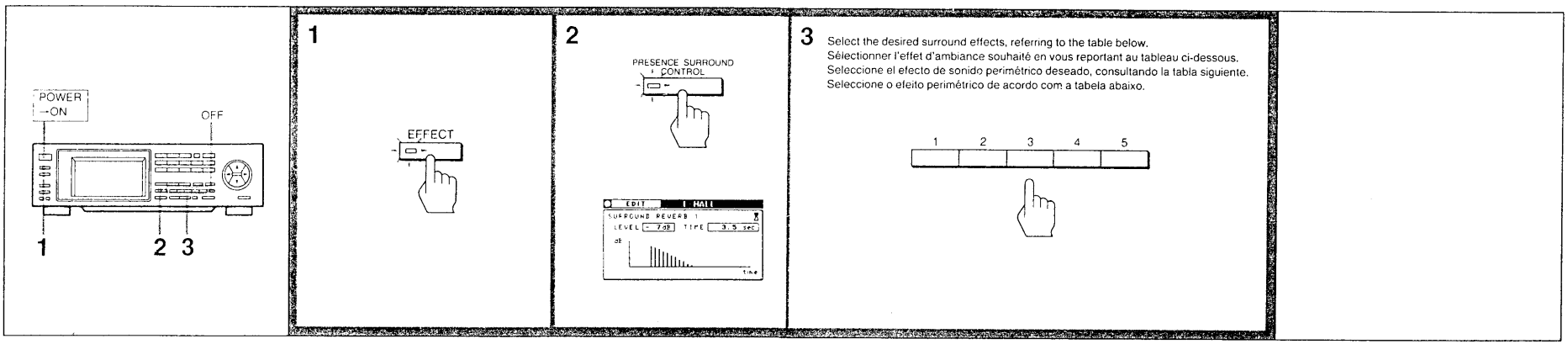
Lorsque vous utilisez les effets d'ambiance divers vous pouvez créer une atmosphère ressemblant à celle que vous auriez lors d'un concert ou dans un stade.

Empleo de los efectos perimétricos de presencia digital

Empleando los diversos efectos de sonido perimétrico de esta unidad, podrá crear una sensación de presencia similar a la experimentada en una sala de conciertos o un estadio.

Efeito perimétrico digital

Mediante o uso dos vários efeitos perimétricos, pode-se simular a sensação de estar presente numa sala de concertos ou num estádio.



1	REVERB 1	Atmosphere of a large concert hall (for classical music)
2	REVERB 2	Atmosphere of a stadium (reverberations from far away)
3	REVERB 3	Atmosphere of a large stone church (long reverberations including high frequency sound)
4	EARLY REFLECTION 1	Sound of live concert
5	EARLY REFLECTION 2	Simulated stereo effect on monaural sources

To cancel the surround effects
Press OFF.

1	REVERB 1	Atmosphère d'une grande salle de concert (pour musique classique)
2	REVERB 2	Atmosphère d'un stade (réverbération lointaine)
3	REVERB 3	Atmosphère d'une grande église de pierre (longue réverbération et son de haute fréquence)
4	EARLY REFLECTION 1	Son d'un concert en "life"
5	EARLY REFLECTION 2	Imite l'effet stéréo sur des sources monophoniques

Annulation de l'effet d'ambiance
Appuyer syr OFF.

1	REVERB 1	Atmósfera de una sala de conciertos grande (para música clásica)
2	REVERB 2	Atmósfera de un estadio (reverberaciones procedentes de lejos)
3	REVERB 3	Atmósfera de una iglesia grande (reverberaciones de lejos que incluyen sonido de alta frecuencia)
4	EARLY REFLECTION 1	Sonido de un concierto en vivo
5	EARLY REFLECTION 2	Efecto estéreo simulado de fuentes monoaurales

Para cancelar los efectos de sonido perimétrico
Presione OFF.

1	REVERB 1	simula o ambiente de uma grande sala de concertos (para músicas clássicas)
2	REVERB 2	simula o ambiente de estádios (revereração distanies)
3	REVERB 3	simula grandes igrejas com paredes de pedra (longas reverberações incluindo sons de altas frequências)
4	EARLY REFLECTION 1	som de concertos ao vivo
5	EARLY REFLECTION 2	simula o efeito estereofónico em materiais monofónicos

Para cancelar os efeitos perimétricos
Pressione OFF.

When operating with the remote commander
The DPS button on the remote commander corresponds to the PRESENCE SURROUND CONTROL button on the main unit. Every time the button is pressed, the surround effects switch in the following sequence:

→ 1 → 2 → 3 → 4 → 5 → OFF →

Fonctionnement par télécommande
La touche DPS de la télécommande correspond à la touche PRESENCE SURROUND CONTROL de l'appareil principal. Chaque fois que la touche est enfoncée, les effets d'ambiance changent dans l'ordre suivant:

→ 1 → 2 → 3 → 4 → 5 → OFF →

Cuando emplee el telemando
La tecla DPS del telemando corresponde a la tecla PRESENCE SURROUND CONTROL de la unidad principal. Cada vez que presione la tecla, el efecto de sonido perimétrico cambiará en la secuencia siguiente:

→ 1 → 2 → 3 → 4 → 5 → OFF (Ausencia de efecto) →

Controle com o telecomando
A tecla DPS no telecomando corresponde à tecla PRESENCE SURROUND CONTROL no aparelho principal. A cada pressionar da tecla, os efeitos perimétricos são alterados como segue:

→ 1 → 2 → 3 → 4 → 5 → OFF →

Using the Digital Dynamic Sound

This unit is provided with two digital dynamic sound functions; compressor and expander (noise reduction) functions.
The compressor function is especially effective for making low volume sound more powerful although it can be enjoyed at normal volume levels. Also, it is effective for recording tapes meant for playing in a Walkman or car stereo, since it has the effect of making low volume sound easier to hear over external noise.
The expander function can reduce disturbing noise between selections recorded on a tape. Therefore it is effective for playing tapes.

Utilisation du son dynamique numérique

Cet appareil est pourvu de deux fonctions de son dynamique; les fonctions de compression et d'expansion (réduction de bruit).
La fonction de compression est spécialement conçue pour rendre des sons de bas volume plus puissants, tout en étant écoutés à un niveau normal. Cette fonction agit tout particulièrement lors de l'enregistrement de cassettes destinées à un Walkman ou une chaîne stéréo pour automobile, car elle rend un son de faible volume plus facile à écouter, malgré les nuisances extérieures.
La fonction d'expansion permet de réduire les bruits gênants entre les plages d'une cassette. Elle est donc particulièrement efficace lors de la lecture de cassettes.

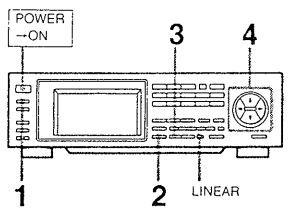
Empleo del sonido dinámico digital

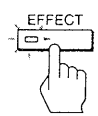
Esta unidad dispone de dos funciones de sonido dinámico digital; funciones de compresión y expansión (reducción de ruido).
La función de compresión es especialmente efectiva para hacer el sonido de bajo volumen más potente aunque pueda disfrutarse a niveles de volumen normal. Además, será efectivo para grabar cintas que deseen reproducirse en un Walkman o en un sistema estéreo, porque tiene el efecto de hacer que el sonido de bajo volumen pueda oírse más fácilmente sobre el ruido externo.
La función de expansión puede reducir el ruido perturbador entre las canciones grabadas en una cinta. Por lo tanto, será efectivo para reproducir cintas.

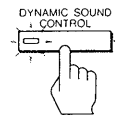
Compressor/Expansor

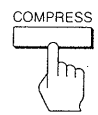
Este aparelho é equipado com duas funções de som digital: as funções de compressão e de expansão.
A função de compressão é especialmente efectiva para fazer com que sons de baixo volume sejam reforçados a um nível de volume normal. Também, é efectiva para gravação de fitas a serem escutadas em walkmans ou auto-estéreos, já que esta função compensa os sons de baixo volume em relação aos sons externos.
A função de expansão pode reduzir os ruídos de fundo entre músicas gravadas em fitas, sendo portanto efectivo para reprodução de cassetes.

Obtaining the Compressor Function Effect — Fonction de compression — Obtención del efecto de la función de compresión — Função de compressão



1 

2 

3 

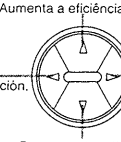
4 Adjust the release time* and efficiency.
Régler la durée de disponibilité* et l'efficacité.
Ajuste el tiempo de liberación* y la eficacia.
Ajuste o tempo de desactivação da função* e eficiência.

* The release time is the time during which a function remains alive after it is disengaged.
* La durée de l'effet déclenché par une fonction après arrêt de celle-ci, s'appelle durée de disponibilité.
* Tiempo de liberación es el tiempo durante el cual una función permance en efecto después de haberse desactivado.
* O tempo de duração da função é o tempo de duração do efeito da função após a liberação da tecla correspondente.

Increase the efficiency.
Augmentation de l'efficacité.
Aumenta la eficacia.
Aumenta a eficiência.

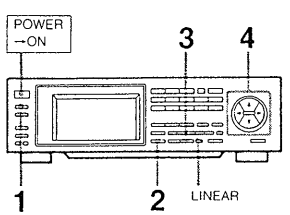
Shorten the release time.
Diminution de la durée de disponibilité.
Acorta el tiempo de liberación.
Encurte o tempo de desactivação da função.

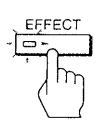
Lengthen the release time.
Augmentation de la durée de disponibilité.
Alarga el tiempo de liberación.
Aumente o tempo de desactivação da função.

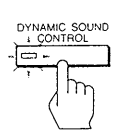


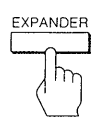
Decrease the efficiency.
Diminution de la durée.
Disminuye la eficacia.
Diminua a eficiência.

Obtaining the Expander Function — Fonction d'expansion — Obtención de la función de expansión — Função de expansão



1 

2 

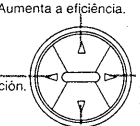
3 

4 Adjust the release time* and efficiency.
Régler la durée de disonibilité* et l'efficacité.
Ajuste el tiempo de liberación* y la eficacia.
Ajuste o tempo de desactivação da função* e eficiência.

Increase the efficiency.
Augmentation de l'efficacité.
Aumenta la eficacia.
Aumenta a eficiência.

Shorten the release time.
Diminution de la durée de disponibilité.
Acorta el tiempo de liberación.
Encurte o tempo de desactivação da função.

Lengthen the release time.
Augmentation de la durée de disponibilité.
Alarga el tiempo de liberación.
Aumente o tempo de desactivação da função.



Decrease the efficiency.
Diminution de la durée.
Disminuye la eficacia.
Diminua a eficiência.

To disengage the digital dynamic sound
Press LINEAR.

If the EFFECT button is pressed (so that the indicator turns off), all of the digital surround processor effects will be disengaged.

Suppression du son dynamique numérique
Appuyer sur LINEAR.

Si l'on appuie sur la touche EFFECT (de manière à éteindre l'indicateur), tous les effets de traitement numérique du son d'ambiance sont libérés.

Desactivación del sonido dinámico digital
Presione LINEAR.

Si presiona la tecla EFFECT (de forma que se apague el indicador), se desactivarán todos los efectos del procesador de sonido perimétrico digital.

Desactivação do compressor/expansor
Pressione LINEAR.

Se EFFECT for pressionada (fazendo com que a indicação se desligue), todos os efeitos do processador perimétrico digital serão desactivados.

Storing the Individually-Adjusted Sound – Personal File

By storing the individual digital surround processor effects in the memory, you can easily call up the settings at any desired time.
You can store up to 10 combinations of the equalizer, surround, and dynamic sound functions, and also can give names to these individual settings by using 50 characters and a space.

Mémorisation du son réglé par l'utilisateur – Fichier personnel

En mémorisant les effets de traitement numérique d'ambiance choisis selon vos préférences, il vous est facile de rappeler ces préréglages au moment voulu.
Vous pouvez mémoriser jusqu'à 10 combinaisons à l'aide des fonctions d'égalisation, d'ambiance et de son dynamique. Vous pouvez aussi donner à ces combinaisons un nom en vous servant des 50 caractères et de l'espacement.

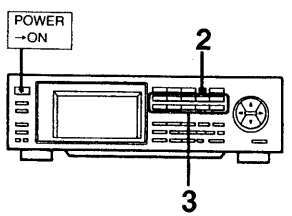
Almacenamiento de sonido individualmente ajustado – Archivo personal

Almacenando los efectos del procesador de sonido perimétrico digital en la memoria, podrá invocar fácilmente los ajustes en el momento deseado. Usted podrá almacenar hasta 10 combinaciones de funciones de ecualización, de sonido perimétrico, y de sonido dinámico, y también podrá asignarles nombres empleando 50 caracteres y un espacio.

Armazenamento da combinação de ajustes – Personal File

Mediante o armazenamento de cada efeito digital na memória, pode-se facilmente obter os ajustes no momento desejado.
Pode-se armazenar um máximo de 10 combinações de equalização, efeito perimétrico, e compressão/expansão. Designe a cada combinação, um memorando, dispondo-se de 50 caracteres e um espaço.

Storing the Desired Adjustments — Mémorisation des réglages souhaités — Almacenamiento de los ajustes deseados — Armazenamento dos ajuste desejados



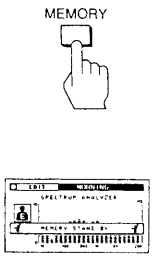
1 Adjust the Digital Parametric Equalizer (see page 18), Digtal Presence Surround (see page 22), and Digital Dynamic Sound (see page 26).

Régler l'égaliseur paramétrique numérique (voir page 18), le son numérique d'ambiance (voir page 22) et le son numérique dynamique (voir page 26).

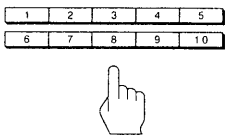
Ajuste el ecualizador perimétrico digital (consulte la página 19), el sonido paramétrico de presencia digital (consulte la página 23), y el sonido dinámico digital (consulte la página 27).

Ajuste o equalizador paramétrico digital (página 19), o efeito perimétrico digital (página 23), e compressão/expansão (página 27).

2



3 Assign a number to the individual adjustments while "MEMORY STAND BY" is indicated.
Donner un nom à ces réglages personnels lorsque "MEMORY STANDBY"est affiché.
Asigne un número a los ajustes individuales mientras se esté indicando "MEMORY STAND BY".
Designe um número para cada combinação de ajustes enquanto «MEMORY STAND BY» estiver indicada.



"P. FILE MEMORY" is indicated, and the adjustment is memorized in the selected number.

"P.FILE MEMORY" est affiché et le réglage est mémorisé sous le numéro sélectionné.

Aparecerá "P. FILE MEMORY", y el ajuste se memorizará en el número seleccionado.

«P.FILE MEMORY» é indicado, e o ajuste é memorizado no número seleccionado.

Calling up the Settings

Press PERSONAL FILE* and then the numeric button in which the desired adjustment has been stored.

* *When using the remote commander, press SELECT (S10/M10/P.F). Memorized settings to be called up change in the following sequence;*

→ SELECT 10 (S10) → MORE 10 (M10) →
PERSONAL FILE (P.F.) ←

Rappel des réglages

Appuyer sur "PERSONAL FILE"*, puis sur la touche numérique où le réglage souhaité a été mémorisé.

* *Si la télécommande est utilisée, appuyer sur SELECT (S10/M10/P.F). Les réglages mémorisés à rappeler changent dans l'odre suivant:*

→ SELECT 10 (S10) → MORE 10 (M10) →
PERSONAL FILE (P.F.) ←

Invocación de ajustes

Presione PERSONAL FILE* y después la tecla numérica en la que haya almacenado el ajuste deseado.

* *Cuando emplee el telemando, presione SELECT (S10/M10/P.F). Los ajustes memorizados que podrán invocarse cambiarán en la secuencia siguiente:*

→ SELECT 10 (S10) → MORE 10 (M10) →
PERSONAL FILE (P.F.) ←

Reobtenção dos ajustes

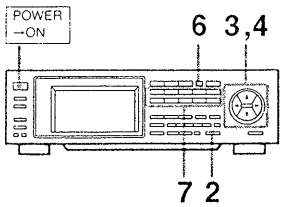
Pressione PERSONAL FILE* e então a tecla numérica correspondente ao ajuste armazenado.

* *Ao utilizar o telecomando, pressione SELECT (S10/M10/P.F). Os ajustes armazenados reobtidos alteramse na seguinte ordem:*

→ SELECT 10 (S10) → MORE 10 (M10) →
PERSONAL FILE (P.F.) ←

Storing the Individually-Adjusted Sound – Personal File

Giving Names to the Individual Adjsutments – Character Edit



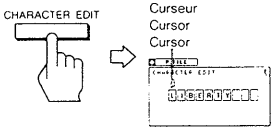
1 Adjust the sound, or call up the individual setting.

Régler le son ou rappeler le réglage personnel.

Ajuste el sonido, o invoque el ajuste individual.

Ajuste o som, ou obtenha a combinação de ajustes já armazenada.

2



The preset name will be indicated.

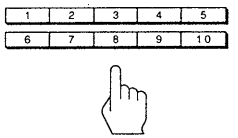
3 Select a character.

4 Move the cursor.

5 Repeat steps 3 and 4.

6

7 Assign a number to the individual adjustment while "MEMORY STAND BY" is indicated.



The assigned personal file number and "P.FILE MEMORY" are indicated.

To change the name
Repeat the above procedure from the beginning.

Available Characters

( ) * + , − . / 0 1 2 3 4 5 6 7 8 9 : % < = > ? (space)
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Use ◄ of the CURSOR CONTROL buttons to call up a previous character.
Keep pressing ▲ or ▼ of the CURSOR CONTROL buttons to skip characters.

Mémorisation du son réglé par l'utilisateur – Fichier personnel

Dénomination des réglages personnels – Montage de caractères

1 Régler le son ou rappeler le réglage personnel.

2 Cursor / Curseur / Cursor / Cursor

The preset name will be indicated.
Le nom préréglé est affiché.

3 Choisir un caractère.

4 Bouger le curseur.

5 Répéter les étapes 3 et 4.

6 MEMORY

7 Désigner un nombre au réglage personnel lorsque "MEMORY STAND BY" est affiché.

The assigned personal file number and "P.FILE MEMORY" are indicated.
Le numéro de fichier personnel désigné et "P.FILE MEMORY" sont affichés.

Modification du nom
Répéter la procédure précédente à partir du début.

Caractères disponibles

( ) * + , − . / 0 1 2 3 4 5 6 7 8 9 : % < = > ? (espace)
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Utiliser ◄ des touches CURSOR CONTROL pour appeler le caractère précédent. Maintenir ▲ ou ▼ enfoncé sur les touches CURSOR CONTROL pour sauter des caractères.

Almacenamiento de sonido individualmente ajustado – Archivo personal

Asignación de nombres a los ajustes individualmente ajustados – Archivo personal

1 Ajuste el sonido, o invoque el ajuste individual.

2 Cursor / Curseur / Cursor / Cursor

Se le indicará el nombre asignado.

3 Seleccione un carácter.

4 Mueva el cursor.

5 Repita los pasos 3 y 4.

6 MEMORY

7 Asigne un número al ajuste individual mientras se esté indicando "MEMORY STAND BY".

Será indicado o memorando.

Para cambiar el nombre
Repita el procedimiento anterior desde el comienzo.

Caracteres disponibles

( ) * + , − . / 0 1 2 3 4 5 6 7 8 : % < = . ? (espacio)
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Emplee ◄ de las teclas CURSOR CONTROL para invocar un carácter anterior. Mantenga presionada ▲ o ▼ de las teclas CURSOR CONTROL para saltar caracteres.

Armazenamento da combinação de ajustes – Personal File

Designação de memorandos para a combinação de ajustes – Edição de memorandos

1 Ajuste o som, ou obtenha a combinação de ajustes já armazenada.

2 Cursor / Curseur / Cursor / Cursor

O número designado e «P.FILE MEMORY» acendem-se.

3 Seleccione um caracter.

4 Desloque o cursor.

5 Repita os passos 3 e 4.

6 MEMORY

7 Designe um número à combinação de ajustes enquanto «MEMORY STAND BY » estiver acesa.

Para alterar o memorando
Repita os procedimentos acima indicados a partir do início.

Caracteres disponíveis

( ) * + , − . / 0 1 2 3 4 5 6 7 8 9 : % < = > ? (espaço)
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Empregue a tecla ◄ de CURSOR CONTROL para obter o caracter anterior.
Mantenha ▲ ou ▼ de CURSOR CONTROL pressionada para saltar caracteres.

Using the Sub-Menu Window

The unit is equipped with 5 other essential functions which are listed in the sub-menu window.

Press SUB MENU and then a number for the desired function.

Affichage du menu secondaire

Cet appareil est équipé de 5 autres fonctions essentielles affichées sur le menu secondaire.

Appuyer sur la touche SUB MENU, puis sur un numéro de la fonction souhaitée.

Empleo de la ventanilla del submenú

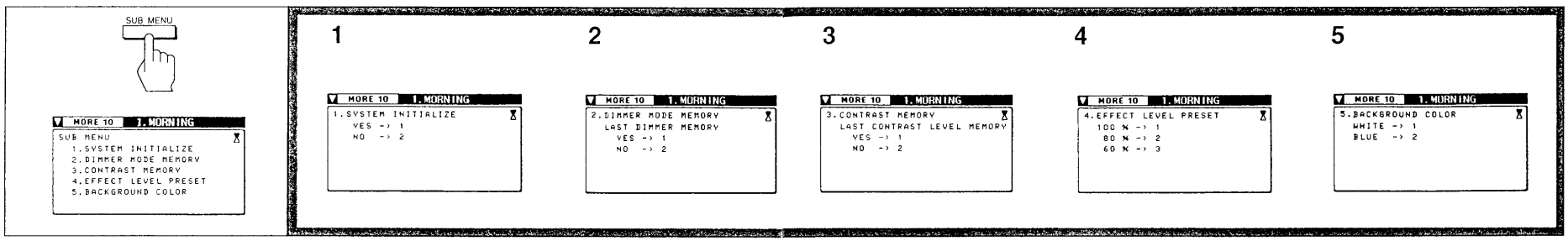
La unidad dcispone de otras 5 funciones esenciales indicadas en la ventanilla del submenú.

Presione SUB MENU y después el número correspondiente a la función deseada.

Mostrador sub-menu

O aparelho vem equipado com 5 outras funções essenciais que estão listadas no sub-menu.

Pressione SUB MENU e então o número da função desejada.



1 SYSTEM INITIALIZE
All of the digital surround processor effects can be initialized.
By pressing 1, the settings of following items will return to the initial factory settings.
- Digital parametric equalizer (see page 18)
- Digital presence surround (see page 22)
- Digital dynamic sound (see page 26)
- Effect level (see page 10)
- Personal file (see page 28)
- Dimmer (see page 12)
- Contrast (see page 12)
- Effect level preset (see below)

2 DIMMER MODE MEMORY
The brightness of the display, individually set, can be memorized.
To memorize it, press 1.
If you press 2, the display becomes brighter every time the power is switched on.

3 CONTRAST MEMORY
The contrast level of the display, individually set, can be memorized.
To memorize it, press 1.
If you press 2, the contrast level becomes 50% every time the power is switched on.

4 EFFECT LEVEL PRESET
The effect level can be preset and memorized prior to calling up SELECT 10 or MORE 10 settings.
Three preset effect levels are provided. Press 1, 2, or 3 according to the desired level.
The effect level of the setting being used cannot be changed. To change it, recall the same setting or another one after pressing 1, 2, or 3.

5 BACKGROUND COLOR
The background color of the display is selectable. There are two alternatives; white and blue.
Press 1 for white or 2 for blue.

1 Initialisation du système (SYSTEM INITIALIZE)
Tous les effets de traitement numérique de l'ambiance peuvent être initialisés.
En appuyant sur 1, les réglages des paramètres suivants reviennent aux réglages initiaux effectués en usine.
- Egalisation paramétrique numérique (voir page 18)
- Environnement numérique (voir page 22)
- Son dynamique numérique (voir page 26)
- Niveau d'effet (voir page 10)
- Fichier personnel (voir page 28)
- Atténuateur (voir page 12)
- Contraste (voir page 12)
- Préréglage du niveau d'effet (voir ci-dessous)

2 Mémorisation du mode d'atténuation (DIMMER MODE MEMORY)
La luminosité de l'écran réglée individuellement peut être mise en mémoire.
Pour cela, appuyer sur 1.
Si l'on appuie sur 2, l'affichage devient plus lumineux après la mise sous tension.

3 Mémorisation du contraste (CONTRAST MEMORY)
Le niveau de contraste de l'affichage réglé personnellement peut être mémorisé.
Pour le mémoriser, appuyer sur 1.
Si l'on appuie sur 2, le niveau de contraste est à 50% à chaque mise sous tension.

4 Préréglage du niveau d'effet (EFFECT LEVEL PRESET)
Le niveau d'effet peut être mis en mémoire avant de rappeler les préréglages SELECT 10 ou MORE 10.
Trois niveaux d'effets sont fournis. Appuyer sur 1, 2 ou 3 selon le niveau souhaité.
Le niveau d'effet du réglage utilisé ne peut être modifié.
Pour cela, rappeler le même réglage ou tout autre en appuyant sur 1, 2 ou 3.

5 Couleurs de fond (BACKGROUND COLOR)
Vous pouvez choisir entre deux couleurs de fond de l'écran: blanc ou bleu.
Appuyer sur 1 pour obtenir le blanc et 2 pour le bleu.

1 SYSTEM INITIALIZE
Podrán inicializarse todos los efectos del procesador perimétrico digital. Al presionar 1, los ajustes de los ítemes siguientes volverán a los inicialmente realizados en fábrica.
- Ecualización paramétrica digital (consulte la página 19)
- Sonido paramétrico de presencia digital (consulte la página 23)
- Sonido dinámico digital (consulte la página 27)
- Nivel del efecto (consulte la página 11)
- Archivo personal (consulte la página 29)
- Brillo (consulte la página 13)
- Contraste (consulte la página 13)
- Nivel de los ajustes memorizados (consulte más abajo)

2 DIMMER MODE MEMORY
El brillo del visualizador, individualmente ajustado, podrá memorizarse. Para memorizarlo, presione 1.
Si presiona 2, el visualizador se volverá más brillante cada vez que conecte la alimentación.

3 CONTRAST MEMORY
El nivel de contraste del visualizador, individualmente ajustado, podrá memorizarse.
Para memorizarlo, presione 1.
Si presiona 2, el nivel del contraste se volverá el 50% cada vez que conecte la alimentación.

4 EFFECT LEVEL PRESET
El nivel del efecto podrá preajustar y memorizarse antes de invocar los ajustes de SELECT 10 y MORE 10.
Existen tres niveles de efecto preajustados. Presione 1, 2, o 3 de acuerdo con el nivel deseado.
El nivel del efecto de un ajuste que esté empleándose no podrá cambiarse. Para cambiarlo, invoque el mismo ajuste u otro después de presionar 1, 2, o 3.

5 BACKGROUND COLOR
El color de fondo del visualizador es seleccionable.
Existen dos alternativas: blanco y azul.
Presione 1 para blanco o 2 para azul.

1 SYSTEM INITIALIZE
Todos os efeitos do processador perimétrico digital são apagados.
Pressionando-se 1, os ajustes dos seguintes itens retornam aos níveis pré-programados na fábrica.
- Equalizador paramétrico digital (página 19)
- Efeito perimétrico digital (página 23)
- Compressão/Expansão (página 27)
- Nível do efeito (página 11)
- Personal File (página 29)
- Iluminação (página 13)
- Constraste (página 13)
- Nível do efeito pré-programado (veja abaixo)

2 DIMMER MODE MEMORY
A iluminação do mostrador, ajustado por item, pode ser armazenada.
Para armazenar, pressione 1.
Se pressiona 2, a iluminação do mostrador torna-se mais intensa cada vez que se liga a alimentação.

3 CONTRAST MEMORY
O nível de contraste do mostrador, ajustado por item, pode ser armazenado.
Para armazenar, pressione 1.
Se pressiona 2, o nível de contraste fica a 50% a cada vez que se liga a alimentação.

4 EFFECT LEVEL PRESET
O nível do efeito pode ser pré-programado e armazenado antes de obter os ajuste SELECT 10 ou MORE 10.
3 níveis de efeitos estão programados. Pressione 1, 2, ou 3 de acordo com o nível desejado.
O nível do efeito do ajuste em uso não pode ser alterado. Para alterar, reobtenha o mesmo ajuste ou um outro depois do pressionamento de 1, 2, ou 3.

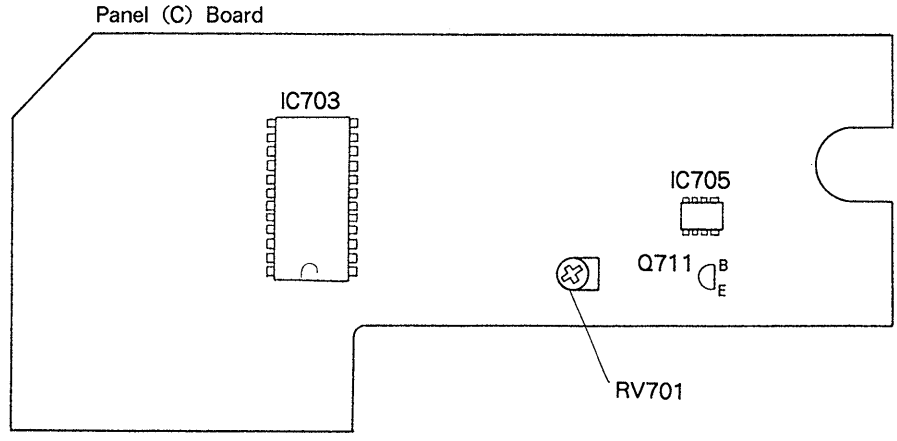
5 BACKGROUND COLOR
É possível seleccionar a cor de fundo do mostrador, entre branco e azul.
Pressione 1 para o branco ou 2 para o azul.

SECTION 2
ADJUSTMENT

【Electrical adjustment】

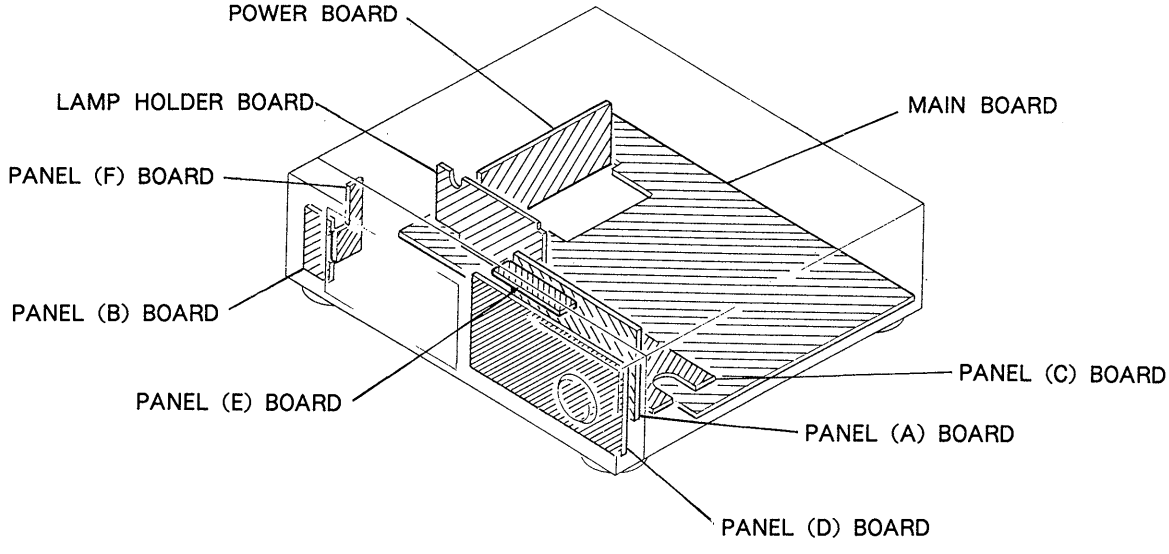
• Contrast adjustment

Adjust RV701 so that the voltage between the collector and the emitter of Q711 is set to14.2 V in room temperature (approximately 25℃) (Optimal condition when contrast is 50%)



SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



3-2. IC DESCRIPTION

IC701 Feature Control Microcomputer (HD6435328F6)

Displaying of LCD and LED is controlled in accordance with spectrum analyzer data input, key input, and audio bus input. Data of equipments' settings are transmitted to the device control microcomputer (IC501) in serial communication.

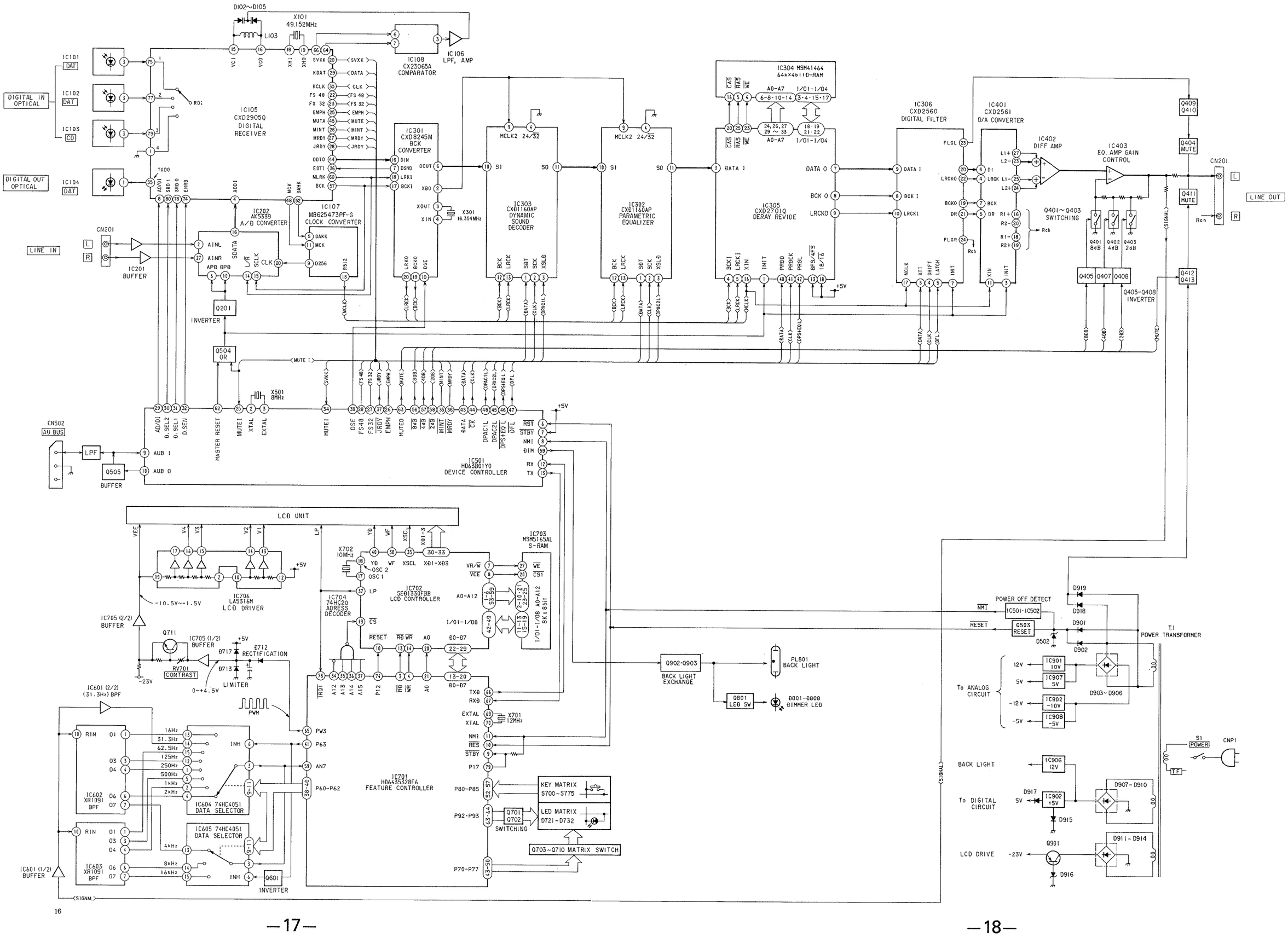
Pin No.	Pin Name	I/O	Description
1	R/W	—	Not used.
2	$\overline{DS}$	—	
3	$\overline{RD}$	O	Data reading signal output to IC702 (LCD controller)
4	$\overline{WR}$	O	Data writing signal output to IC702 (LCD controller)
5	Vcc	—	Power supply terminal (+5 V)
6	MD0	I	Mode setting input (Fixed to "L".)
7	MD1	I	Mode setting input (Fixed to "H".)
8	MD2	I	Mode setting input (Fixed to "L".)
9	$\overline{STBY}$	I	Hardware standby mode input
10	$\overline{RES}$	I	Reset input
11	$\overline{NMI}$	I	Power interrupt detection input. When it is set to "L", P17 (pin 79) is set to after the backup processing.
12	V_{SS}	—	GND
13~20	D0~D7	I/O	Data bus to IC702 (LCD contrller)
21	A0	O	IC702 (LCD controller) internal register select output
22~28	A1~A7	O	Address output. Not used.
29	Vss	—	GND
30~33	A8~A11	O	Address output. Not used.
34~37	A12~A15	O	Address output to generate IC702 (LCD controller) $\overline{CS}$ signal
38~41	P60~P63	O	BPF select for spectrum analyzer to IC604 and IC605 (multiplexer)
42	Vcc	—	Power supply terminal (+5 V)
43~50	P70~P77	O	Key and LED matrix output
51	AV_{SS}	—	Analog GND
52~58	P80~P86	I	Key matrix input
59	AN7	I	Spectrum analyzer data input (analog)
60	AVcc	—	Analog system power supply terminal (+5 V)
61	P90	—	Not used.
62	P91	—	Not used.
63,64	P92,P93	O	LED matrix output
65	PW3	O	LCD contrast adjustment PWM output (Darker contrast when closer to 100%)
66	TXD	O	Serial communication output to IC501 (device control microcomputer)
67	RXD	I	Serial communication input to IC501 (device control microcomputer)
68	P97	—	Not used.
69	EXTAL	I	Clock input (12 MHz)
70	XTAL	O	Clock output
71	V_{SS}	—	GND
72	CK	—	Not used.
73	E	—	Not used.
74	P12	O	Reset output to IC702 (LCD controller)
75~77	P13~P15	—	Not used.
78	$\overline{IRQ1}$	I	LCD X driver latch pulse input
79	P17	O	Output (STBY (pin 9) is set to "L") to physically set the backup mode when the power is set to OFF.
80	$\overline{A5}$	—	Not used.

IC702 LCD controller (SED1330FBB)

Character data transmitted from the panel microcomputer (IC701) are stored in the display memory (IC703), read out periodically, converted to LCD signal, and output.

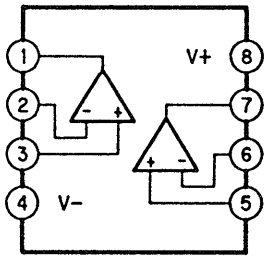
Pin No.	Pin Name	I/O	Description
1~6	VA5~VA0	O	Address output to IC703 (display memory)
7	VR/$\overline{W}$	O	Read/write signal output to IC703 (display memory)
8	$\overline{VCE}$	O	Chip select output to IC703 (display memory)
9	$\overline{REF}$ NC	O	Test output. Not used.
10	$\overline{RES}$	I	System reset input
11	SYNC NC	O	Test output. Not used.
12	CLO NC	O	
13	$\overline{RD}$	I	Data read signal input from IC701 (panel microcomputer)
14	$\overline{WR}$	I	Data write signal input form IC701 (panel microcomputer)
15	SEL2	I	Interface bus slect (Set always to GND.)
16	SEL1	I	Interface bus select (Set always to GND.)
17	XG	I	Clock input (10 MHz)
18	XD	O	Clock output
19	$\overline{CS}$	I	Chip select input from the address decoder (IC704)
20	A0	I	Internal register select input
21	V_{DD}	—	Power supply terminal (+5 V)
22~29	D0~D7	I/O	Data bus to IC701 (panel microcomputer)
30~33	XD3~XD0	O	Data output to LCD X driver
34	XECL	O	Enable chain clock output to LCD X driver. Not used.
35	XSCL	O	Data shift clock output to LCD X driver
36	Vss	—	GND
37	LP	O	LCD X driver latch pulse output
38	WF	O	Frame signal output
39	YDIS	O	LCD display OFF output. Not used.
40	YD	O	Data output to LCD Y driver
41	YSCL	O	Data shift clock output to LCD Y driver. Not used.
42~49	VD7~VD0	I/O	Data bus to IC703 (display memory)
50~59	VA15~VA6	O	Address output (VA13 to VA15 are not used) to IC703 (display memory).
60	NC	—	

3-3. BROCK DIAGRAM

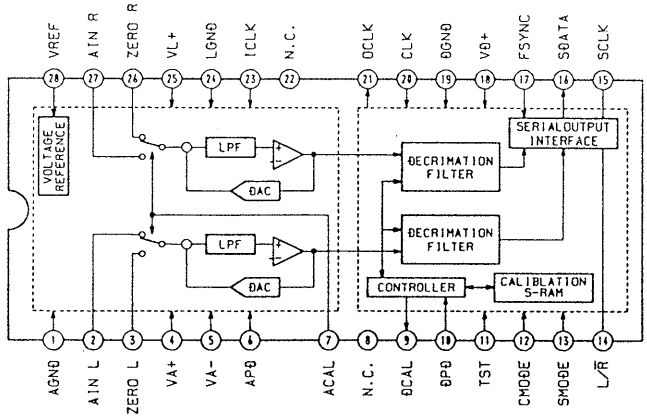


3-4. IC BROCK DIAGRAMS

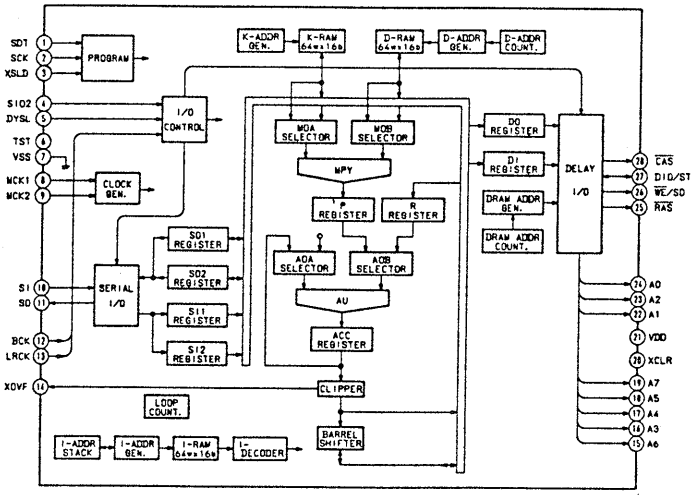
• IC201, 404, 705 M5218AP



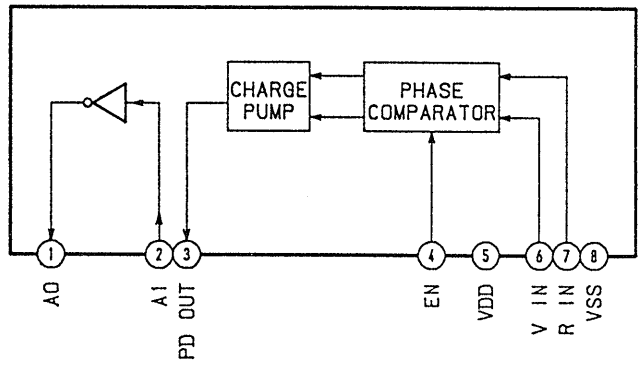
• IC202 AK53389



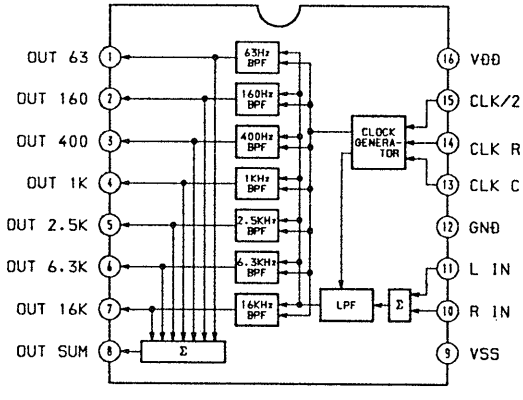
• IC302,303 CXD1160AP



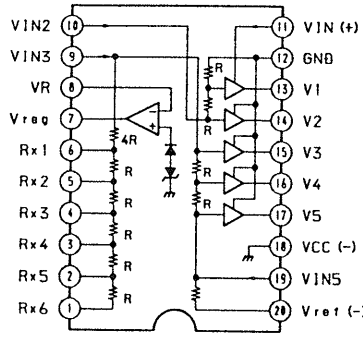
• IC108 CX23065A



• IC602,603 XR1091



• IC706 LM5316M



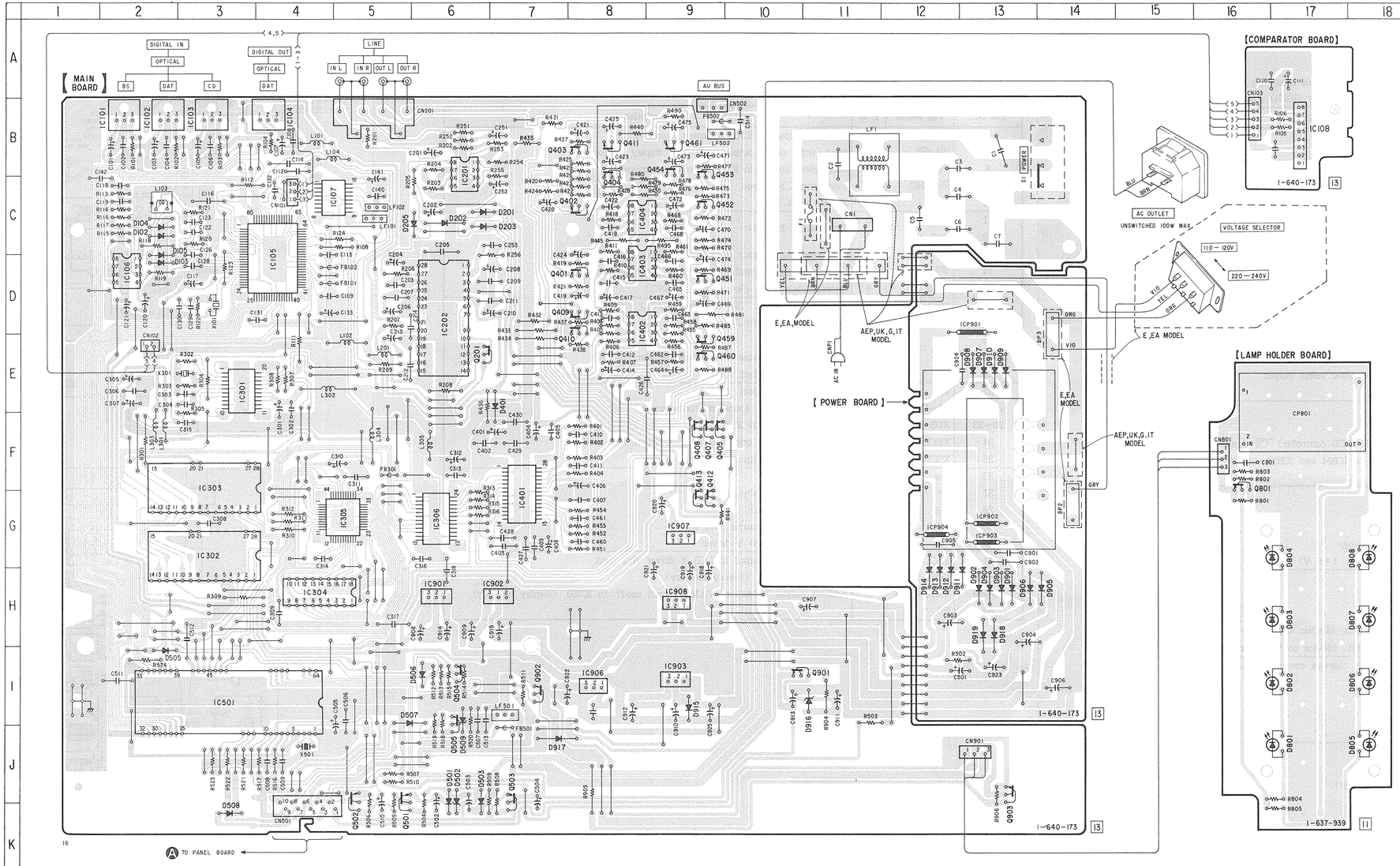
• Semiconductor Location

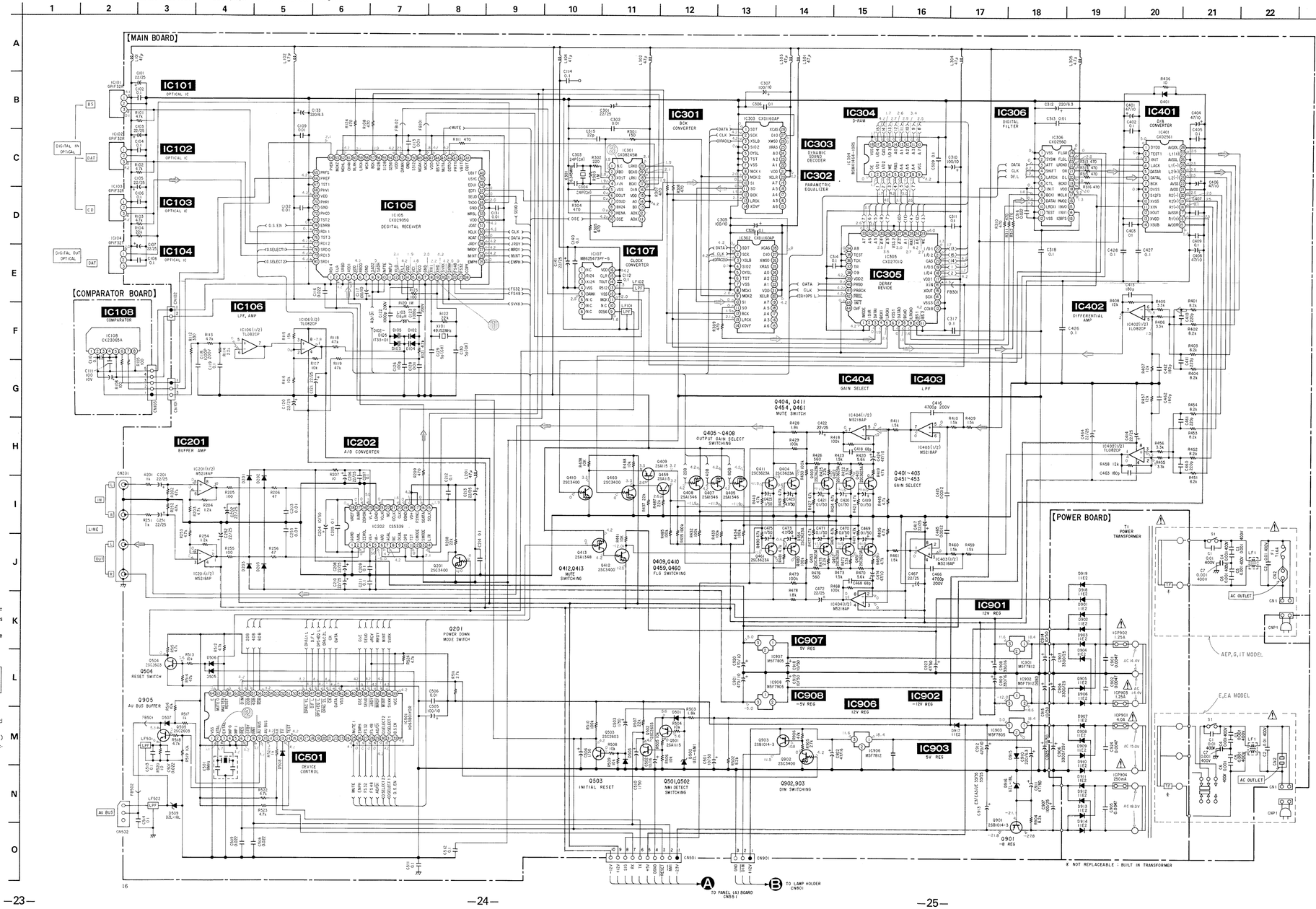
Ref. No.	Location	Ref. No.	Location
D102	C-2	IC908	H-9
D103	D-2	Q201	E-6
D104	C-2	Q401	D-8
D105	D-2	Q402	C-8
D201	C-6	Q403	B-8
D202	C-6	Q404	C-8
D203	C-6	Q405	F-9
D205	C-6	Q407	F-9
D401	E-7	Q408	F-9
D501	J-6	Q409	D-8
D502	J-6	Q410	D-8
D503	J-6	Q411	B-8
D505	I-2	Q412	G-9
D506	I-2	Q413	G-9
D507	I-5	Q451	D-9
D508	K-3	Q452	C-9
D509	J-6	Q453	B-9
D801	J-17	Q454	B-9
D802	I-17	Q459	E-9
D803	H-17	Q460	E-9
D804	G-17	Q461	B-9
D805	J-18	Q501	K-5
D806	I-18	Q502	K-5
D807	H-18	Q503	J-7
D808	G-18	Q504	I-6
D901	H-13	Q505	J-6
D902	H-13	Q801	F-16
D903	H-13	Q901	I-11
D904	H-13	Q902	I-7
D905	H-14	Q903	J-13
D906	H-13		
D907	E-13		
D908	E-13		
D909	E-13		
D910	E-13		
D911	H-13		
D912	H-12		
D913	H-12		
D914	H-12		
D915	I-9		
D916	I-11		
D917	J-7		
D918	H-13		
D919	H-13		
IC101	B-2		
IC102	B-2		
IC103	B-3		
IC104	B-4		
IC105	D-4		
IC106	D-2		
IC107	C-4		
IC108	B-17		
IC201	B-6		
IC202	D-6		
IC301	E-3		
IC302	G-3		
IC303	F-3		
IC304	H-4		
IC305	G-5		
IC306	G-6		
IC401	G-7		
IC402	D-8		
IC403	D-8		
IC404	C-8		
IC501	I-3		
IC901	H-6		
IC902	H-7		
IC903	I-9		
IC906	I-8		
IC907	G-9		

Note on Mounting Diagram:

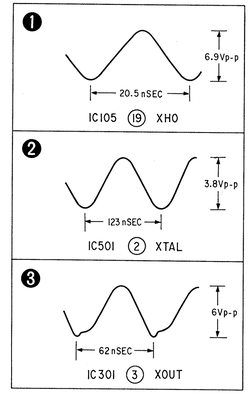
- ○—— : parts extracted from the component side.
- ▒▒▒ : component side.

G : Germany
IT : Italian
EA: Saudi Arabia





MAIN BOARD



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

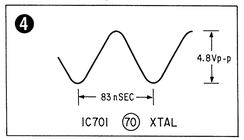
- : B+ Line
- : B– Line

no mark : No-signal, PHONO MODE

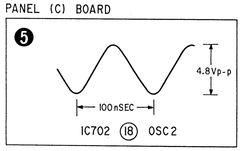
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

G : Germany
IT : Italian
EA: Saudi Arabia

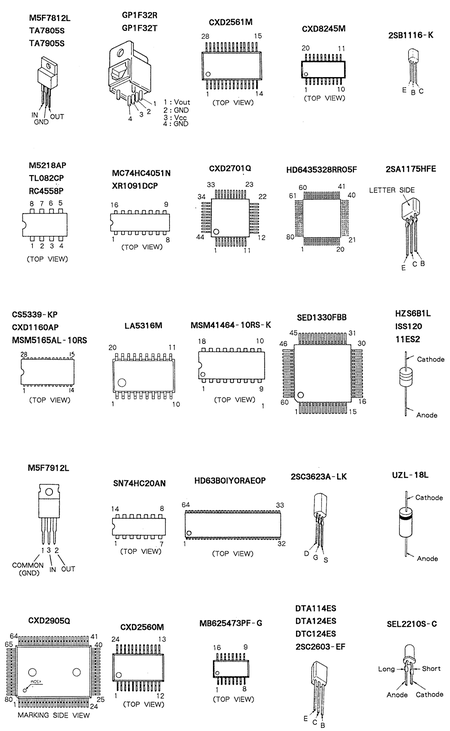
PANEL (A) BOARD



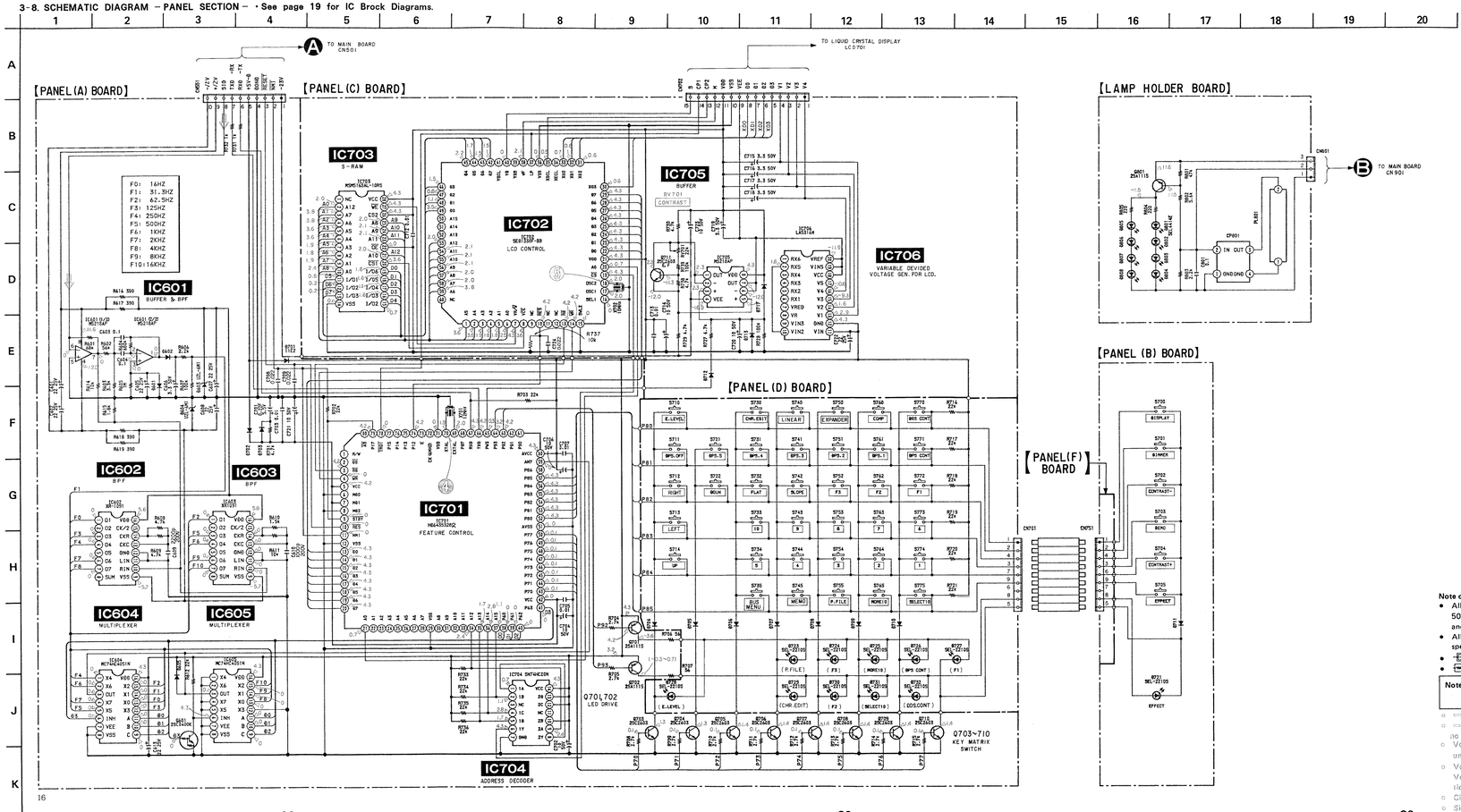
PANEL (C) BOARD



3-7. SEMICONDUCTOR LEAD LAYOUTS



3-8. SCHEMATIC DIAGRAM – PANEL SECTION – ・See page 19 for IC Brock Diagrams.



G : Germany
IT : Italian
EA: Saudi Arabia

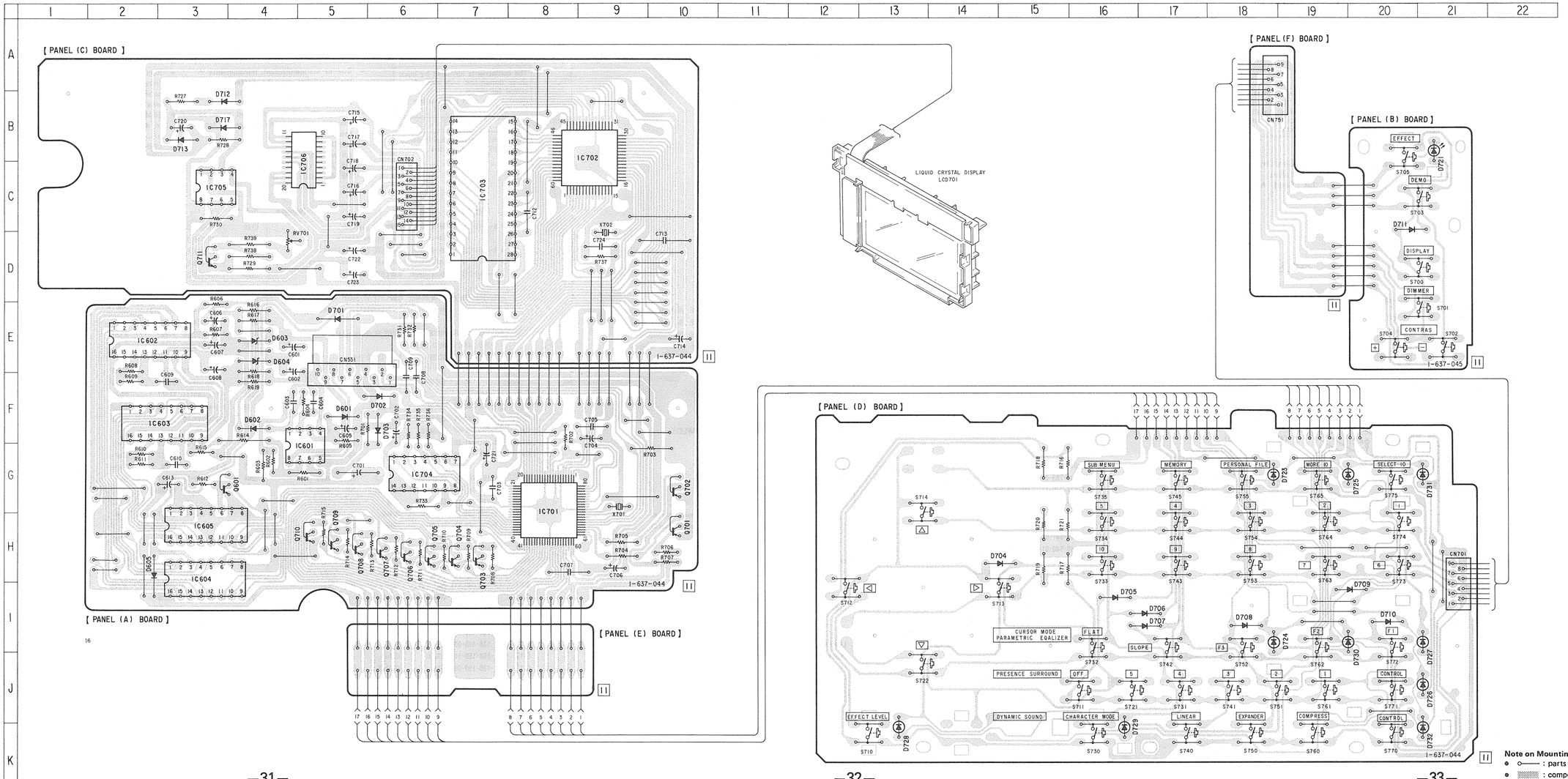
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- : 8Ω Line
- : 8– Line
  no mark : No-signal, PHONO MODE
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10MΩ) Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

3-9. PRINTED WIRING BOARDS – PANEL SECTION – • See page 27 for Semiconductor Lead Layouts.



16

• Semiconductor Location

Ref. No.	Location
D601	F-5
D602	F-4
D603	E-4
D604	E-4
D605	H-2
D701	E-5
D702	F-6
D703	F-6
D704	H-14
D705	I-16
D706	I-16
D707	I-16
D708	I-18
D709	H-19
D710	I-20
D711	C-20
D712	B-3
D713	B-3
D717	B-3
D721	B-20
D723	G-18
D724	I-18
D725	G-19
D726	J-20
D727	I-20
D728	J-13
D729	J-16
D730	I-19
D731	G-20
D732	J-20
IC601	F-5
IC602	E-2
IC603	F-3
IC604	H-3
IC605	H-3
IC701	G-8
IC702	B-9
IC703	C-7
IC704	G-6
IC705	C-3
IC706	B-5
Q601	G-3
Q701	H-10
Q702	G-10
Q703	H-7
Q704	H-7
Q705	H-6
Q706	H-6
Q707	H-6
Q708	H-5
Q709	H-5
Q710	I-5
Q711	D-3

G : Germany
IT : Italian
EA : Saudi Arabia

Note on Mounting Diagram:
- ○—— : parts extracted from the component side.
- ▒▒▒ : component side.

SECTION 4
EXPLODED VIEWS

NOTE :

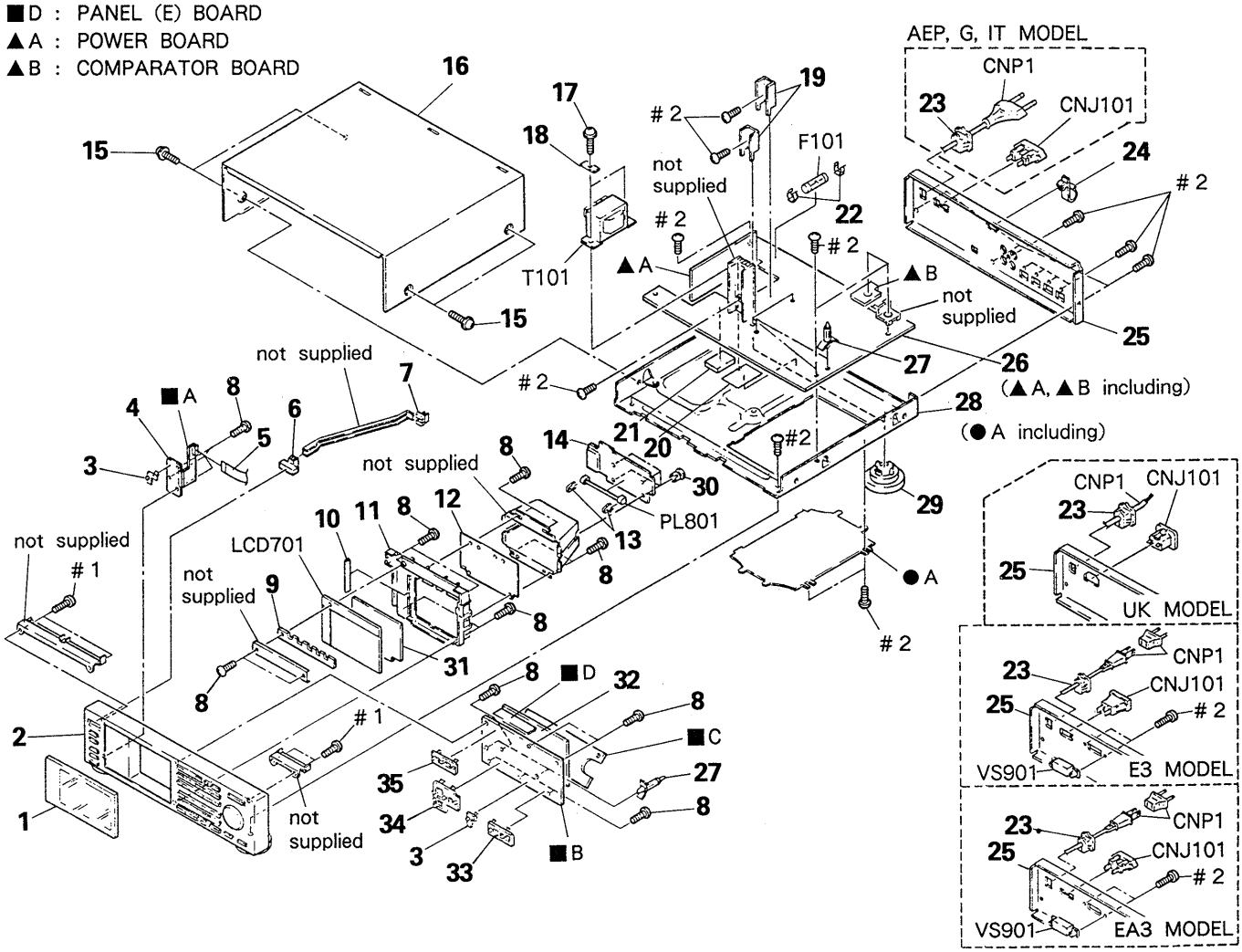
- – XX, – X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

G : Germany
IT : Italian
EA : Saudi Arabia

OVERALL SECTION

■A : PANEL (F) BOARD
■B : PANEL (D) BOARD
■C : PANEL (C) BOARD
■D : PANEL (E) BOARD
▲A : POWER BOARD
▲B : COMPARATOR BOARD



Ref. No.	Part No.	Description	Remarks
1	4-941-523-11	WINDOW	
2	X-4941-442-1	PANEL ASSY, FRONT	
3	* 4-941-534-01	HOLDER (1), LED	
4	* 1-637-045-11	PANEL B BOARD	
5	1-575-216-11	WIRE, FLAT TYPE (9 CORE)	
6	4-921-919-01	BUTTON (P)	
7	4-866-342-00	JOINT (B), KNOB	
8	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
9	* 4-941-531-01	CUSHION	
10	* 4-941-530-01	CUSHION	
11	* 4-941-527-01	HOLDER (LCD)	
12	* 4-942-169-01	PLATE, SHIELD	
13	* 4-942-783-01	HOLDER	
14	* 1-637-939-11	LAMP HOLDER BOARD	
15	3-704-366-01	SCREW (CASE) (M3X8)	
16	4-919-377-01	CASE	
17	4-946-541-01	SCREW (4X8), +PWHTT	
18	4-946-540-01	WASHER (SQUARE)	
19	* 3-309-144-21	HEAT SINK	
20	* 4-945-761-01	SHEET (INSULATING)	
21	9-911-841-XX	CUSHION	
22	* 1-533-213-31	HOLDER, FUSE	
23	* 3-703-244-00	BUSHING (2104), CORD (AEP, UK, Germany, Italian, Saudi Arabia)	
	* 3-703-571-11	BUSHING (S) (4516), CORD (E)	
24	* 2-379-614-01	HOOK	
25	* 4-943-823-11	PANEL, BACK (AEP, Germany, Italian)	
	* 4-943-823-21	PANEL, BACK (UK)	
	* 4-943-823-31	PANEL, BACK (E)	
	* 4-943-823-51	PANEL, BACK (Saudi Arabia)	

Ref. No.	Part No.	Description	Remarks
26	* A-4345-233-A	MAIN BOARD, COMPLETE (AEP, Italian)	
	* A-4345-234-A	MAIN BOARD, COMPLETE (Germany)	
	* A-4345-235-A	MAIN BOARD, COMPLETE (UK)	
	* A-4345-236-A	MAIN BOARD, COMPLETE (E, Saudi Arabia)	
27	* 4-924-098-91	HOLDER, PC BOARD	
28	* 4-924-520-31	CHASSIS	
29	4-934-884-01	FOOT	
30	4-812-134-00	RIVET NYLON, 3.5	
31	* 4-941-543-01	ILLUMINATOR (4)	
32	* A-4345-232-A	PANEL (A) BOARD, COMPLETE	
33	* 4-941-536-01	HOLDER (3), LED	
34	* 4-941-535-01	HOLDER (2-1), LED	
35	* 4-941-541-01	HOLDER (2-2), LED	
CNJ101	⚠1-526-751-00	OUTLET, AC (UK)	
	⚠1-526-794-11	OUTLET, AC (AEP, Germany, Italian, Saudi Arabia)	
	⚠1-526-882-00	OUTLET, AC (E)	
CNP1	⚠1-575-651-11	CORD, POWER (AEP, Germany, Italian)	
	⚠1-575-654-11	CORD, POWER (Saudi Arabia)	
	⚠1-575-656-11	CORD, POWER (E)	
	⚠1-575-669-21	CORD, POWER (UK)	
F101	⚠1-532-259-00	FUSE, TIME-LAG (AEP, UK, Germany, Italian) (1.6A)	
LCD701	1-809-202-11	DISPLAY PANEL, LIQUID CRYSTAL	
PL801	1-519-653-11	GAS DISCHARGE TUBE, FLUORESCENT	
VS901	⚠1-570-046-21	SWITCH, VOLTAGE CHANGE (E, Saudi Arabia)	
T101	⚠1-450-596-11	TRANSFORMER, POWER (AEP, Germany, Italian)	
	⚠1-450-597-11	TRANSFORMER, POWER (UK)	
	⚠1-450-598-11	TRANSFORMER, POWER (E, Saudi Arabia)	

MAIN

SECTION 5
ELECTRICAL PARTS LIST

NOTE :

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be defferent from the parts specified in the diagrams or the components used on the set.
- −XX, −X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... , uPB... , μPB... , uPC... , μPC... , uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remarks
*	A-4345-234-A	MAIN BOARD, COMPLETE (Germany)			
		**********			
*	A-4345-233-A	MAIN BOARD, COMPLETE (AEP, Italian)			
		**********			
*	A-4345-235-A	MAIN BOARD, COMPLETE (UK)			
		**********			
*	A-4345-236-A	MAIN BOARD, COMPLETE (E, Saudi Arabia)			
		**********			
*	1-533-213-31	HOLDER, FUSE (AEP, UK, Germany, Italian)			
*	3-309-144-21	HEAT SINK			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C1	⚠1-161-744-00	CERAMIC	0.01uF	400V	
C2	⚠1-161-744-00	CERAMIC	0.01uF	400V	
C3	⚠1-161-741-00	CERAMIC	0.001uF 10%	400V	
C4	⚠1-161-741-00	CERAMIC	0.001uF 10%	400V	
C5	⚠1-161-741-00	CERAMIC	0.001uF 10%	400V	
C6	⚠1-161-741-00	CERAMIC	0.001uF 10%	400V	
C7	⚠1-161-741-00	CERAMIC	0.001uF 10%	400V	
C101	1-126-049-11	ELECT	22uF 20%	25V	
C102	1-164-159-11	CERAMIC	0.1uF	50V	
C103	1-126-049-11	ELECT	22uF 20%	25V	
C104	1-164-159-11	CERAMIC	0.1uF	50V	
C105	1-126-049-11	ELECT	22uF 20%	25V	
C106	1-164-159-11	CERAMIC	0.1uF	50V	
C107	1-126-049-11	ELECT	22uF 20%	25V	
C108	1-164-159-11	CERAMIC	0.1uF	50V	
C109	1-136-153-00	FILM	0.01uF 5%	50V	
C110	1-136-165-00	FILM	0.1uF 5%	50V	
C111	1-124-443-00	ELECT	100uF 20%	10V	
C112	1-164-159-11	CERAMIC	0.1uF	50V	
C113	1-136-153-00	FILM	0.01uF 5%	50V	
C114	1-164-159-11	CERAMIC	0.1uF	50V	
C116	1-161-494-00	CERAMIC	0.022uF	25V	
C117	1-124-443-00	ELECT	100uF 20%	10V	
C118	1-164-079-11	CERAMIC	330PF 10%	50V	
C119	1-136-165-00	FILM	0.1uF 5%	50V	

Ref. No.	Part No.	Description			Remarks
C120	1-126-049-11	ELECT	22uF 20%	25V	
C121	1-126-049-11	ELECT	22uF 20%	25V	
C122	1-106-343-00	MYLAR	1000PF 5%	200V	
C123	1-106-343-00	MYLAR	1000PF 5%	200V	
C126	1-164-070-11	CERAMIC	100PF 5%	50V	
C128	1-136-153-00	FILM	0.01uF 5%	50V	
C129	1-164-014-11	CERAMIC	5PF 0.25PF	50V	
C130	1-164-014-11	CERAMIC	5PF 0.25PF	50V	
C131	1-136-153-00	FILM	0.01uF 5%	50V	
C132	1-136-153-00	FILM	0.01uF 5%	50V	
C133	1-124-587-11	ELECT	220uF 20%	6.3V	
C140	1-136-165-00	FILM	0.1uF 5%	50V	
C141	1-126-049-11	ELECT	22uF 20%	25V	
C142	1-164-159-11	CERAMIC	0.1uF	50V	
C143	1-136-165-00	FILM	0.1uF 5%	50V	
C201	1-126-049-11	ELECT	22uF 20%	25V	
C202	1-126-049-11	ELECT	22uF 20%	25V	
C203	1-136-153-00	FILM	0.01uF 5%	50V	
C204	1-126-059-11	ELECT	10uF 20%	50V	
C205	1-164-159-11	CERAMIC	0.1uF	50V	
C206	1-126-049-11	ELECT	22uF 20%	25V	
C207	1-164-159-11	CERAMIC	0.1uF	50V	
C208	1-126-049-11	ELECT	22uF 20%	25V	
C209	1-164-159-11	CERAMIC	0.1uF	50V	
C210	1-126-049-11	ELECT	22uF 20%	25V	
C211	1-164-159-11	CERAMIC	0.1uF	50V	
C212	1-164-159-11	CERAMIC	0.1uF	50V	
C213	1-126-049-11	ELECT	22uF 20%	25V	
C214	1-164-159-11	CERAMIC	0.1uF	50V	
C251	1-126-049-11	ELECT	22uF 20%	25V	
C252	1-126-049-11	ELECT	22uF 20%	25V	
C253	1-136-153-00	FILM	0.01uF 5%	50V	
C301	1-126-049-11	ELECT	22uF 20%	25V	
C302	1-136-153-00	FILM	0.01uF 5%	50V	
C303	1-102-960-00	CERAMIC	24PF 5%	50V	

Ref. No.	Part No.	Description				Remarks
C304	1-102-960-00	CERAMIC	24PF	5%	50V	
C305	1-124-443-00	ELECT	100uF	20%	10V	
C306	1-164-159-11	CERAMIC	0.1uF		50V	
C307	1-124-443-00	ELECT	100uF	20%	10V	
C308	1-164-159-11	CERAMIC	0.1uF		50V	
C309	1-164-159-11	CERAMIC	0.1uF		50V	
C310	1-124-443-00	ELECT	100uF	20%	10V	
C311	1-164-159-11	CERAMIC	0.1uF		50V	
C312	1-124-587-11	ELECT	220uF	20%	6.3V	
C313	1-136-153-00	FILM	0.01uF	5%	50V	
C314	1-136-165-00	FILM	0.1uF	5%	50V	
C315	1-164-027-11	CERAMIC	22PF	5%	50V	
C316	1-161-494-00	CERAMIC	0.022uF		25V	
C317	1-164-159-11	CERAMIC	0.1uF		50V	
C318	1-164-159-11	CERAMIC	0.1uF		50V	
C401	1-126-022-11	ELECT	47uF	20%	10V	
C402	1-164-159-11	CERAMIC	0.1uF		50V	
C403	1-164-159-11	CERAMIC	0.1uF		50V	
C404	1-126-022-11	ELECT	47uF	20%	10V	
C405	1-136-165-00	FILM	0.1uF	5%	50V	
C406	1-126-022-11	ELECT	47uF	20%	10V	
C407	1-136-165-00	FILM	0.1uF	5%	50V	
C408	1-126-022-11	ELECT	47uF	20%	10V	
C409	1-164-159-11	CERAMIC	0.1uF		50V	
C410	1-164-077-11	CERAMIC	220PF	10%	50V	
C411	1-164-077-11	CERAMIC	220PF	10%	50V	
C412	1-164-076-11	CERAMIC	180PF	10%	50V	
C413	1-164-076-11	CERAMIC	180PF	10%	50V	
C414	1-126-049-11	ELECT	22uF	20%	25V	
C415	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C416	1-106-359-00	MYLAR	4700PF	5%	200V	
C417	1-126-049-11	ELECT	22uF	20%	25V	
C418	1-164-066-11	CERAMIC	68PF	5%	50V	
C419	1-124-463-00	ELECT	0.1uF	20%	50V	
C420	1-124-463-00	ELECT	0.1uF	20%	50V	
C421	1-124-463-00	ELECT	0.1uF	20%	50V	
C422	1-126-049-11	ELECT	22uF	20%	25V	
C423	1-126-163-11	ELECT	4.7uF	20%	50V	
C424	1-126-022-11	ELECT	47uF	20%	10V	
C425	1-126-301-11	ELECT	1uF	20%	50V	
C426	1-164-159-11	CERAMIC	0.1uF		50V	
C427	1-164-159-11	CERAMIC	0.1uF		50V	
C428	1-164-159-11	CERAMIC	0.1uF		50V	
C429	1-164-159-11	CERAMIC	0.1uF		50V	
C430	1-164-159-11	CERAMIC	0.1uF		50V	

Ref. No.	Part No.	Description				Remarks
C460	1-164-077-11	CERAMIC	220PF	10%	50V	
C461	1-164-077-11	CERAMIC	220PF	10%	50V	
C462	1-164-076-11	CERAMIC	180PF	10%	50V	
C463	1-164-076-11	CERAMIC	180PF	10%	50V	
C464	1-126-049-11	ELECT	22uF	20%	25V	
C465	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C466	1-106-359-00	MYLAR	4700PF	5%	200V	
C467	1-126-049-11	ELECT	22uF	20%	25V	
C468	1-164-066-11	CERAMIC	68PF	5%	50V	
C469	1-124-463-00	ELECT	0.1uF	20%	50V	
C470	1-124-463-00	ELECT	0.1uF	20%	50V	
C471	1-124-463-00	ELECT	0.1uF	20%	50V	
C472	1-126-049-11	ELECT	22uF	20%	25V	
C473	1-126-163-11	ELECT	4.7uF	20%	50V	
C474	1-126-022-11	ELECT	47uF	20%	10V	
C475	1-126-301-11	ELECT	1uF	20%	50V	
C501	1-126-059-11	ELECT	10uF	20%	50V	
C502	1-126-157-11	ELECT	10uF	20%	16V	
C503	1-126-301-11	ELECT	1uF	20%	50V	
C504	1-126-301-11	ELECT	1uF	20%	50V	
C505	1-126-177-11	ELECT	100uF	20%	10V	
C506	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C507	1-161-494-00	CERAMIC	0.022uF		25V	
C508	1-161-494-00	CERAMIC	0.022uF		25V	
C509	1-161-494-00	CERAMIC	0.022uF		25V	
C510	1-126-301-11	ELECT	1uF	20%	50V	
C511	1-164-159-11	CERAMIC	0.1uF		50V	
C512	1-164-159-11	CERAMIC	0.1uF		50V	
C513	1-164-159-11	CERAMIC	0.1uF		50V	
C514	1-164-159-11	CERAMIC	0.1uF		50V	
C901	1-161-377-00	CERAMIC	0.0047uF	20%	50V	
C902	1-161-377-00	CERAMIC	0.0047uF	20%	50V	
C903	1-126-029-11	ELECT	3300uF	20%	25V	
C904	1-126-029-11	ELECT	3300uF	20%	25V	
C905	1-161-377-00	CERAMIC	0.0047uF	20%	50V	
C906	1-126-029-11	ELECT	3300uF	20%	25V	
C907	1-124-478-11	ELECT	100uF	20%	25V	
C908	1-126-025-11	ELECT	330uF	20%	16V	
C909	1-126-025-11	ELECT	330uF	20%	16V	
C910	1-124-587-11	ELECT	220uF	20%	6.3V	
C911	1-124-910-11	ELECT	47uF	20%	50V	
C912	1-124-472-11	ELECT	470uF	20%	10V	
C913	1-124-482-11	ELECT	33uF	20%	35V	
			(E, Saudi Arabia)			
C913	1-124-242-00	ELECT	33uF	20%	25V	
			(AEP, UK, Germany, Italian)			

MAIN

Ref. No.	Part No.	Description			Remarks
C914	1-126-059-11	ELECT	10uF	20% 50V	
C915	1-126-059-11	ELECT	10uF	20% 50V	
C918	1-126-059-11	ELECT	10uF	20% 50V	
C919	1-126-059-11	ELECT	10uF	20% 50V	
C920	1-124-472-11	ELECT	470uF	20% 10V	
C921	1-124-472-11	ELECT	470uF	20% 10V	
C922	1-126-022-11	ELECT	47uF	20% 16V	
C923	1-124-910-11	ELECT	47uF	20% 50V	
C924	1-161-377-00	CERAMIC	0.0047uF	20% 50V	
C925	1-126-059-11	ELECT	10uF	20% 50V	
		〈 CONNECTOR 〉			
BP1	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P (AEP, UK, Germany, Italian)			
*	1-535-141-00	BASE POST 22MM (10MM PITCH) 4P (E, Saudi Arabia)			
BP2	* 1-560-595-00	TERMINAL (WITH BASE) (E, Saudi Arabia)			
BP3	* 1-560-595-00	TERMINAL (WITH BASE) (E, Saudi Arabia)			
CN1	* 1-564-321-00	PIN, CONNECTOR 2P			
CN101	* 1-564-506-11	PLUG, CONNECTOR 3P			
CN102	* 1-564-505-11	PLUG, CONNECTOR 2P			
CN103	* 1-564-508-11	PLUG, CONNECTOR 5P			
CN201	1-573-520-11	JACK, PIN 4P (LINE)			
CN501	1-569-406-11	SOCKET, CONNECTOR 10P			
CN502	* 1-565-561-11	PIN, CONNECTOR 3P (AU BUS)			
CN901	* 1-564-506-11	PLUG, CONNECTOR 3P			
		〈 DIODE 〉			
D102	8-713-300-88	DIODE	1T33C-01		
D103	8-713-300-88	DIODE	1T33C-01		
D104	8-713-300-88	DIODE	1T33C-01		
D105	8-713-300-88	DIODE	1T33C-01		
D201	8-719-912-20	DIODE	1SS120		
D202	8-719-912-20	DIODE	1SS120		
D203	8-719-912-20	DIODE	1SS120		
D205	8-719-912-20	DIODE	1SS120		
D401	8-719-912-20	DIODE	1SS120		
D501	8-719-912-20	DIODE	1SS120		
D502	8-719-933-36	DIODE	HZS6B1L		
D503	8-719-912-20	DIODE	1SS120		
D505	8-719-912-20	DIODE	1SS120		
D506	8-719-912-20	DIODE	1SS120		
D507	8-719-912-20	DIODE	1SS120		

Ref. No.	Part No.	Description		Remarks
D508	8-719-912-20	DIODE	1SS120	
D509	8-719-000-75	DIODE	UZL-7L1-TP	
D901	8-719-200-82	DIODE	11ES2	
D902	8-719-200-82	DIODE	11ES2	
D903	8-719-200-82	DIODE	11ES2	
D904	8-719-200-82	DIODE	11ES2	
D905	8-719-200-82	DIODE	11ES2	
D906	8-719-200-82	DIODE	11ES2	
D907	8-719-200-82	DIODE	11ES2	
D908	8-719-200-82	DIODE	11ES2	
D909	8-719-200-82	DIODE	11ES2	
D910	8-719-200-82	DIODE	11ES2	
D911	8-719-200-82	DIODE	11ES2	
D912	8-719-200-82	DIODE	11ES2	
D913	8-719-200-82	DIODE	11ES2	
D914	8-719-200-82	DIODE	11ES2	
D915	8-719-912-20	DIODE	1SS120	
D916	8-719-002-06	DIODE	UZL-18L	
D917	8-719-200-82	DIODE	11ES2	
D918	8-719-200-82	DIODE	11ES2	
D919	8-719-200-82	DIODE	11ES2	
		〈 FERRITE BEAD 〉		
FB101	1-410-396-41	FERRITE BEAD INDUCTOR		
FB102	1-410-397-21	FERRITE BEAD INDUCTOR		
FB301	1-410-397-21	FERRITE BEAD INDUCTOR		
FB501	1-410-397-21	FERRITE BEAD INDUCTOR		
FB502	1-410-397-21	FERRITE BEAD INDUCTOR		
		〈 IC 〉		
IC101	8-749-921-11	IC	GP1F32R (IN/BS)	
IC102	8-749-921-11	IC	GP1F32R (IN/DAT)	
IC103	8-749-921-11	IC	GP1F32R (IN/CD)	
IC104	8-749-921-12	IC	GP1F32T (OUT/DAT)	
IC105	8-759-512-96	IC	CXD2905Q	
IC106	8-759-990-82	IC	TL082CP	
IC107	8-759-517-14	IC	MB625473PF-G	
IC108	8-752-306-51	IC	CX23065A	
IC201	8-759-634-51	IC	M5218AP	
IC202	8-759-504-36	IC	CS5339-KP	
IC301	8-759-511-68	IC	CXD8245M	
IC302	8-752-331-87	IC	CXD1160AP	
IC303	8-752-331-87	IC	CXD1160AP	
IC304	8-759-973-04	IC	MSM41464-10RS-K	
IC305	8-752-341-99	IC	CXD2701Q	

Ref. No.	Part No.	Description	Remarks
IC306	8-752-342-65	IC CXD2560M	
IC401	8-752-343-01	IC CXD2561M	
IC402	8-759-990-82	IC TL082CP	
IC403	8-759-634-51	IC M5218AP	
IC404	8-759-634-51	IC M5218AP	
IC501	8-759-323-77	IC HD63B01Y0RAE0P	
IC901	8-759-604-33	IC M5F7812L	
IC902	8-759-604-51	IC M5F7912L	
IC903	8-759-231-53	IC TA7805S	
IC906	8-759-604-33	IC M5F7812L	
IC907	8-759-231-53	IC TA7805S	
IC908	8-759-245-79	IC TA7905S	
ICP901	⚠1-532-845-41	IC, LINK	
ICP902	⚠1-532-840-41	IC, LINK	
ICP903	⚠1-532-840-41	IC, LINK	
ICP904	⚠1-532-833-41	IC, LINK	
		〈 COIL 〉	
L101	1-410-517-11	INDUCTOR 47uH	
L102	1-410-324-11	INDUCTOR 4.7uH	
L103	1-406-416-11	COIL (OSC)	
L104	1-410-517-11	INDUCTOR 47uH	
L201	1-410-517-11	INDUCTOR 47uH	
L301	1-410-517-11	INDUCTOR 47uH	
L302	1-410-517-11	INDUCTOR 47uH	
L303	1-410-517-11	INDUCTOR 47uH	
L304	1-410-517-11	INDUCTOR 47uH	
L305	1-410-324-11	INDUCTOR 4.7uH	
		〈 FILTER 〉	
LF1	1-424-117-11	FILTER, LINE	
LF101	1-424-543-21	FILTER, NOISE	
LF102	1-424-544-21	FILTER, NOISE	
LF501	1-424-543-21	FILTER, NOISE	
LF502	1-424-543-21	FILTER, NOISE	
		〈 TRANSISTOR 〉	
Q201	8-729-900-36	TRANSISTOR DTC124ES	
Q401	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q402	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q403	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q404	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q405	8-729-900-63	TRANSISTOR DTA124ES	
Q407	8-729-900-63	TRANSISTOR DTA124ES	
Q408	8-729-900-63	TRANSISTOR DTA124ES	
Q409	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q410	8-729-900-36	TRANSISTOR DTC124ES	
Q411	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q412	8-729-900-36	TRANSISTOR DTC124ES	
Q413	8-729-900-61	TRANSISTOR DTA114ES	
Q451	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q452	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q453	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q454	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q459	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q460	8-729-900-36	TRANSISTOR DTC124ES	
Q461	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q501	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q502	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q503	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q504	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q505	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q901	8-729-118-01	TRANSISTOR 2SB1116-K	
Q902	8-729-900-36	TRANSISTOR DTC124ES	
Q903	8-729-118-01	TRANSISTOR 2SB1116-K	
		〈 RESISTOR 〉	
R101	1-249-425-11	CARBON 4.7K 5% 1/4W	
R102	1-249-425-11	CARBON 4.7K 5% 1/4W	
R103	1-249-425-11	CARBON 4.7K 5% 1/4W	
R104	1-249-433-11	CARBON 22K 5% 1/4W	
R105	1-249-405-11	CARBON 100 5% 1/4W	
R106	1-249-405-11	CARBON 100 5% 1/4W	
R108	1-249-413-11	CARBON 470 5% 1/4W	
R111	1-249-413-11	CARBON 470 5% 1/4W	
R112	1-249-411-11	CARBON 330 5% 1/4W	
R113	1-249-425-11	CARBON 4.7K 5% 1/4W	
R114	1-249-421-11	CARBON 2.2K 5% 1/4W	
R115	1-249-431-11	CARBON 15K 5% 1/4W	
R116	1-249-429-11	CARBON 10K 5% 1/4W	
R117	1-249-429-11	CARBON 10K 5% 1/4W	
R118	1-249-437-11	CARBON 47K 5% 1/4W	
R119	1-249-437-11	CARBON 47K 5% 1/4W	
R120	1-247-903-00	CARBON 1M 5% 1/4W	
R121	1-249-437-11	CARBON 47K 5% 1/4W	
R122	1-249-433-11	CARBON 22K 5% 1/4W	
R123	1-249-413-11	CARBON 470 5% 1/4W	
R124	1-249-413-11	CARBON 470 5% 1/4W	
R201	1-249-417-11	CARBON 1K 5% 1/4W	
R202	1-249-437-11	CARBON 47K 5% 1/4W	
R203	1-249-425-11	CARBON 4.7K 5% 1/4W	
R204	1-249-418-11	CARBON 1.2K 5% 1/4W	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description				Remarks
R205	1-249-405-11	CARBON	100	5%	1/4W	
R206	1-249-401-11	CARBON	47	5%	1/4W	
R207	1-249-393-11	CARBON	10	5%	1/4W	
R208	1-249-433-11	CARBON	22K	5%	1/4W	
R209	1-249-413-11	CARBON	470	5%	1/4W	
R251	1-249-417-11	CARBON	1K	5%	1/4W	
R252	1-249-437-11	CARBON	47K	5%	1/4W	
R253	1-249-425-11	CARBON	4.7K	5%	1/4W	
R254	1-249-418-11	CARBON	1.2K	5%	1/4W	
R255	1-249-405-11	CARBON	100	5%	1/4W	
R256	1-249-401-11	CARBON	47	5%	1/4W	
R301	1-249-407-11	CARBON	150	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	
R303	1-247-903-00	CARBON	1M	5%	1/4W	
R304	1-249-413-11	CARBON	470	5%	1/4W	
R305	1-249-413-11	CARBON	470	5%	1/4W	
R307	1-249-413-11	CARBON	470	5%	1/4W	
R308	1-249-413-11	CARBON	470	5%	1/4W	
R309	1-249-413-11	CARBON	470	5%	1/4W	
R310	1-249-413-11	CARBON	470	5%	1/4W	
R311	1-249-413-11	CARBON	470	5%	1/4W	
R312	1-249-413-11	CARBON	470	5%	1/4W	
R313	1-249-413-11	CARBON	470	5%	1/4W	
R314	1-249-413-11	CARBON	470	5%	1/4W	
R315	1-249-413-11	CARBON	470	5%	1/4W	
R316	1-249-413-11	CARBON	470	5%	1/4W	
R401	1-249-428-11	CARBON	8.2K	5%	1/4W	
R402	1-249-428-11	CARBON	8.2K	5%	1/4W	
R403	1-249-428-11	CARBON	8.2K	5%	1/4W	
R404	1-249-428-11	CARBON	8.2K	5%	1/4W	
R405	1-249-423-11	CARBON	3.3K	5%	1/4W	
R406	1-249-423-11	CARBON	3.3K	5%	1/4W	
R407	1-249-430-11	CARBON	12K	5%	1/4W	
R408	1-249-430-11	CARBON	12K	5%	1/4W	
R409	1-249-419-11	CARBON	1.5K	5%	1/4W	
R410	1-249-419-11	CARBON	1.5K	5%	1/4W	
R411	1-249-419-11	CARBON	1.5K	5%	1/4W	
R418	1-249-441-11	CARBON	100K	5%	1/4W	
R419	1-249-425-11	CARBON	4.7K	5%	1/4W	
R420	1-249-426-11	CARBON	5.6K	5%	1/4W	
R421	1-249-425-11	CARBON	4.7K	5%	1/4W	
R422	1-249-423-11	CARBON	3.3K	5%	1/4W	
R423	1-249-419-11	CARBON	1.5K	5%	1/4W	
R424	1-249-425-11	CARBON	4.7K	5%	1/4W	
R425	1-249-421-11	CARBON	2.2K	5%	1/4W	

Ref. No.	Part No.	Description				Remarks
R426	1-249-414-11	CARBON	560	5%	1/4W	
R427	1-249-425-11	CARBON	4.7K	5%	1/4W	
R428	1-249-420-11	CARBON	1.8K	5%	1/4W	
R429	1-249-441-11	CARBON	100K	5%	1/4W	
R430	1-249-441-11	CARBON	100K	5%	1/4W	
R431	1-249-425-11	CARBON	4.7K	5%	1/4W	
R432	1-249-441-11	CARBON	100K	5%	1/4W	
R433	1-249-441-11	CARBON	100K	5%	1/4W	
R434	1-249-441-11	CARBON	100K	5%	1/4W	
R435	1-249-441-11	CARBON	100K	5%	1/4W	
R436	1-249-393-11	CARBON	10	5%	1/4W	
R437	1-249-433-11	CARBON	22K	5%	1/4W	
R438	1-249-429-11	CARBON	10K	5%	1/4W	
R440	1-249-425-11	CARBON	4.7K	5%	1/4W	
R441	1-249-429-11	CARBON	10K	5%	1/4W	
R445	1-249-425-11	CARBON	4.7K	5%	1/4W	
R451	1-249-428-11	CARBON	8.2K	5%	1/4W	
R452	1-249-428-11	CARBON	8.2K	5%	1/4W	
R453	1-249-428-11	CARBON	8.2K	5%	1/4W	
R454	1-249-428-11	CARBON	8.2K	5%	1/4W	
R455	1-249-423-11	CARBON	3.3K	5%	1/4W	
R456	1-249-423-11	CARBON	3.3K	5%	1/4W	
R457	1-249-430-11	CARBON	12K	5%	1/4W	
R458	1-249-430-11	CARBON	12K	5%	1/4W	
R459	1-249-419-11	CARBON	1.5K	5%	1/4W	
R460	1-249-419-11	CARBON	1.5K	5%	1/4W	
R461	1-249-419-11	CARBON	1.5K	5%	1/4W	
R468	1-249-441-11	CARBON	100K	5%	1/4W	
R469	1-249-425-11	CARBON	4.7K	5%	1/4W	
R470	1-249-426-11	CARBON	5.6K	5%	1/4W	
R471	1-249-425-11	CARBON	4.7K	5%	1/4W	
R472	1-249-423-11	CARBON	3.3K	5%	1/4W	
R473	1-249-419-11	CARBON	1.5K	5%	1/4W	
R474	1-249-425-11	CARBON	4.7K	5%	1/4W	
R475	1-249-421-11	CARBON	2.2K	5%	1/4W	
R476	1-249-414-11	CARBON	560	5%	1/4W	
R477	1-249-425-11	CARBON	4.7K	5%	1/4W	
R478	1-249-420-11	CARBON	1.8K	5%	1/4W	
R479	1-249-441-11	CARBON	100K	5%	1/4W	
R480	1-249-441-11	CARBON	100K	5%	1/4W	
R481	1-249-425-11	CARBON	4.7K	5%	1/4W	
R485	1-249-441-11	CARBON	100K	5%	1/4W	
R487	1-249-433-11	CARBON	22K	5%	1/4W	
R488	1-249-429-11	CARBON	10K	5%	1/4W	
R490	1-249-425-11	CARBON	4.7K	5%	1/4W	

Ref. No.	Part No.	Description				Remarks
R495	1-249-425-11	CARBON	4.7K	5%	1/4W	
R502	1-249-428-11	CARBON	8.2K	5%	1/4W	
R503	1-249-420-11	CARBON	1.8K	5%	1/4W	
R504	1-249-429-11	CARBON	10K	5%	1/4W	
R505	1-249-429-11	CARBON	10K	5%	1/4W	
R506	1-249-429-11	CARBON	10K	5%	1/4W	
R507	1-249-433-11	CARBON	22K	5%	1/4W	
R508	1-249-429-11	CARBON	10K	5%	1/4W	
R509	1-249-429-11	CARBON	10K	5%	1/4W	
R510	1-249-441-11	CARBON	100K	5%	1/4W	
R511	1-249-422-11	CARBON	2.7K	5%	1/4W	
R512	1-249-425-11	CARBON	4.7K	5%	1/4W	
R513	1-249-429-11	CARBON	10K	5%	1/4W	
R514	1-249-437-11	CARBON	47K	5%	1/4W	
R515	1-249-425-11	CARBON	4.7K	5%	1/4W	
R516	1-249-429-11	CARBON	10K	5%	1/4W	
R517	1-249-417-11	CARBON	1K	5%	1/4W	
R518	1-249-425-11	CARBON	4.7K	5%	1/4W	
R519	1-249-429-11	CARBON	10K	5%	1/4W	
R520	1-249-393-11	CARBON	10	5%	1/4W	
R521	1-249-417-11	CARBON	1K	5%	1/4W	
R522	1-249-425-11	CARBON	4.7K	5%	1/4W	
R523	1-249-425-11	CARBON	4.7K	5%	1/4W	
R524	1-249-425-11	CARBON	4.7K	5%	1/4W	
R904	1-249-428-11	CARBON	8.2K	5%	1/4W	
R905	1-249-422-11	CARBON	2.7K	5%	1/4W	
R906	1-249-437-11	CARBON	47K	5%	1/4W	
		〈 SWITCH 〉				
S1	⚠1-572-716-11	SWITCH, PUSH (AC POWER)				
		〈 VIBRATOR 〉				
X101	1-579-069-11	VIBRATOR, CRYSTAL 48.152MHz				
X301	1-577-614-11	VIBRATOR, CRYSTAL 16.345MHz				
X501	1-579-125-11	VIBRATOR, CERAMIC 8MHz				
**********						
*	A-4345-232-A	PANEL A BOARD, COMPLETE				
		**********				
*	1-637-045-11	PANEL B BOARD				
*	1-637-939-11	LAMP HOLDER BOARD				
*	4-941-534-01	HOLDER (1), LED				
*	4-941-535-01	HOLDER (2-1), LED				
*	4-941-536-01	HOLDER (3), LED				
*	4-941-541-01	HOLDER (2-2), LED				
*	4-942-783-01	HOLDER				
		〈 CAPACITOR 〉				
C601	1-126-049-11	ELECT	22uF	20%	25V	
C602	1-126-049-11	ELECT	22uF	20%	25V	
C603	1-136-165-00	FILM	0.1uF	5%	50V	
C604	1-136-165-00	FILM	0.1uF	5%	50V	
C605	1-126-049-11	ELECT	22uF	20%	25V	
C606	1-126-162-11	ELECT	3.3uF	20%	50V	
C607	1-126-049-11	ELECT	22uF	20%	25V	
C608	1-126-049-11	ELECT	22uF	20%	25V	
C609	1-106-351-00	MYLAR	2200PF	5%	200V	
C610	1-106-343-00	MYLAR	1000PF	5%	200V	
C613	1-126-049-11	ELECT	22uF	20%	25V	
C701	1-125-486-11	DUBLE LAYERS	0.22F		5.5V	
C702	1-126-059-11	ELECT	10uF	20%	50V	
C703	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C704	1-126-059-11	ELECT	10uF	20%	50V	
C705	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C706	1-126-059-11	ELECT	10uF	20%	50V	
C707	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C708	1-161-494-00	CERAMIC	0.022uF		25V	
C709	1-161-494-00	CERAMIC	0.022uF		25V	
C712	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C713	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C714	1-126-059-11	ELECT	10uF	20%	50V	
C715	1-126-162-11	ELECT	3.3uF	20%	50V	
C716	1-126-162-11	ELECT	3.3uF	20%	50V	
C717	1-126-162-11	ELECT	3.3uF	20%	50V	
C718	1-126-162-11	ELECT	3.3uF	20%	50V	
C719	1-126-162-11	ELECT	3.3uF	20%	50V	
C720	1-126-059-11	ELECT	10uF	20%	50V	
C721	1-126-059-11	ELECT	10uF	20%	50V	
C722	1-126-049-11	ELECT	22uF	20%	25V	
C723	1-126-059-11	ELECT	10uF	20%	50V	
C724	1-161-494-00	CERAMIC	0.022uF		25V	
C801	1-164-159-11	CERAMIC	0.1uF		50V	
		〈 CONNECTOR 〉				
CN551	1-569-400-11	PLUG, CONNECTOR 10P				
CN701	* 1-568-828-11	SOCKET, CONNECTOR 9P				
CN702	* 1-580-409-11	SOCKET, CONNECTOR 15P				
CN751	* 1-568-828-11	SOCKET, CONNECTOR 9P				
CN801	* 1-564-506-11	PLUG, CONNECTOR 3P				

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

PANEL A

Ref. No.	Part No.	Description	Remarks
		〈 TRANSFORMER 〉	
CP801	1-239-021-11	ENCAPSULATED COMPONENT	
		〈 DIODE 〉	
D601	8-719-912-20	DIODE 1SS120	
D602	8-719-912-20	DIODE 1SS120	
D603	8-719-933-36	DIODE HZS6B1L	
D604	8-719-933-36	DIODE HZS6B1L	
D605	8-719-912-20	DIODE 1SS120	
D701	8-719-200-82	DIODE 11ES2	
D702	8-719-912-20	DIODE 1SS120	
D703	8-719-912-20	DIODE 1SS120	
D704	8-719-912-20	DIODE 1SS120	
D705	8-719-912-20	DIODE 1SS120	
D706	8-719-912-20	DIODE 1SS120	
D707	8-719-912-20	DIODE 1SS120	
D708	8-719-912-20	DIODE 1SS120	
D709	8-719-912-20	DIODE 1SS120	
D710	8-719-912-20	DIODE 1SS120	
D711	8-719-912-20	DIODE 1SS120	
D712	8-719-912-20	DIODE 1SS120	
D713	8-719-912-20	DIODE 1SS120	
D717	8-719-912-20	DIODE 1SS120	
D721	8-719-301-38	DIODE SEL2210S-C (EFFECT)	
D723	8-719-301-38	DIODE SEL2210S-C (PERSONAL FILE)	
D724	8-719-301-38	DIODE SEL2210S-C (F3)	
D725	8-719-301-38	DIODE SEL2210S-C (MORE 10)	
D726	8-719-301-38	DIODE SEL2210S-C (CONTROL)	
D727	8-719-301-38	DIODE SEL2210S-C (F1)	
D728	8-719-301-38	DIODE SEL2210S-C (EFFECT LEVEL)	
D729	8-719-301-38	DIODE SEL2210S-C (CHARACTER EDIT)	
D730	8-719-301-38	DIODE SEL2210S-C (F2)	
D731	8-719-301-38	DIODE SEL2210S-C (SELECT 10)	
D732	8-719-301-38	DIODE SEL2210S-C (CONTROL)	
D801	8-719-304-37	DIODE SEL4414E-C	
D802	8-719-304-37	DIODE SEL4414E-C	
D803	8-719-304-37	DIODE SEL4414E-C	
D804	8-719-304-37	DIODE SEL4414E-C	
D805	8-719-304-37	DIODE SEL4414E-C	
D806	8-719-304-37	DIODE SEL4414E-C	
D807	8-719-304-37	DIODE SEL4414E-C	
D808	8-719-304-37	DIODE SEL4414E-C	

Ref. No.	Part No.	Description	Remarks
		〈 IC 〉	
IC601	8-759-945-58	IC RC4558P	
IC602	8-759-991-11	IC XR1091DCP	
IC603	8-759-991-11	IC XR1091DCP	
IC604	8-759-007-19	IC MC74HC4051N	
IC605	8-759-007-19	IC MC74HC4051N	
IC701	8-759-323-78	IC HD6435328RR05F	
IC702	8-759-502-88	IC SED1330FBB	
IC703	8-759-502-08	IC MSM5165AL-10RS	
IC704	8-759-916-21	IC SN74HC20AN	
IC705	8-759-945-58	IC RC4558P	
IC706	8-759-823-29	IC LA5316M	
		〈 FLUORESCENT TUBE 〉	
PL801	1-519-653-11	GAS DISCHARGE TUBE, FLUORESCENT	
		〈 TRANSISTOR 〉	
Q601	8-729-900-36	TRANSISTOR DTC124ES	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q702	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q704	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q705	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q706	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q707	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q708	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q710	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q711	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q801	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		〈 RESISTOR 〉	
R601	1-249-439-11	CARBON 68K 5% 1/4W	
R602	1-249-438-11	CARBON 56K 5% 1/4W	
R603	1-249-423-11	CARBON 3.3K 5% 1/4W	
R604	1-247-899-11	CARBON 680K 5% 1/4W	
R605	1-247-903-00	CARBON 1M 5% 1/4W	
R606	1-249-421-11	CARBON 2.2K 5% 1/4W	
R607	1-249-441-11	CARBON 100K 5% 1/4W	
R608	1-249-425-11	CARBON 4.7K 5% 1/4W	
R609	1-249-425-11	CARBON 4.7K 5% 1/4W	
R610	1-249-419-11	CARBON 1.5K 5% 1/4W	

PANEL A

Ref. No.	Part No.	Description				Remarks
R611	1-249-429-11	CARBON	10K	5%	1/4W	
R612	1-249-433-11	CARBON	22K	5%	1/4W	
R614	1-249-429-11	CARBON	10K	5%	1/4W	
R615	1-249-420-11	CARBON	1.8K	5%	1/4W	
R616	1-249-412-11	CARBON	390	5%	1/4W	
R617	1-249-412-11	CARBON	390	5%	1/4W	
R618	1-249-412-11	CARBON	390	5%	1/4W	
R619	1-249-412-11	CARBON	390	5%	1/4W	
R701	1-249-425-11	CARBON	4.7K	5%	1/4W	
R702	1-249-433-11	CARBON	22K	5%	1/4W	
R703	1-249-433-11	CARBON	22K	5%	1/4W	
R704	1-249-422-11	CARBON	2.7K	5%	1/4W	
R705	1-249-422-11	CARBON	2.7K	5%	1/4W	
R706	1-249-402-11	CARBON	56	5%	1/4W	
R707	1-249-402-11	CARBON	56	5%	1/4W	
R708	1-249-422-11	CARBON	2.7K	5%	1/4W	
R709	1-249-422-11	CARBON	2.7K	5%	1/4W	
R710	1-249-422-11	CARBON	2.7K	5%	1/4W	
R711	1-249-422-11	CARBON	2.7K	5%	1/4W	
R712	1-249-422-11	CARBON	2.7K	5%	1/4W	
R713	1-249-422-11	CARBON	2.7K	5%	1/4W	
R714	1-249-422-11	CARBON	2.7K	5%	1/4W	
R715	1-249-422-11	CARBON	2.7K	5%	1/4W	
R716	1-249-433-11	CARBON	22K	5%	1/4W	
R717	1-249-433-11	CARBON	22K	5%	1/4W	
R718	1-249-433-11	CARBON	22K	5%	1/4W	
R719	1-249-433-11	CARBON	22K	5%	1/4W	
R720	1-249-433-11	CARBON	22K	5%	1/4W	
R721	1-249-433-11	CARBON	22K	5%	1/4W	
R727	1-249-425-11	CARBON	4.7K	5%	1/4W	
R728	1-249-441-11	CARBON	100K	5%	1/4W	
R729	1-249-425-11	CARBON	4.7K	5%	1/4W	
R730	1-249-425-11	CARBON	4.7K	5%	1/4W	
R731	1-249-417-11	CARBON	1K	5%	1/4W	
R732	1-249-417-11	CARBON	1K	5%	1/4W	
R733	1-249-433-11	CARBON	22K	5%	1/4W	
R734	1-249-433-11	CARBON	22K	5%	1/4W	
R735	1-249-433-11	CARBON	22K	5%	1/4W	
R736	1-249-433-11	CARBON	22K	5%	1/4W	
R737	1-249-429-11	CARBON	10K	5%	1/4W	
R738	1-249-425-11	CARBON	4.7K	5%	1/4W	
R739	1-249-441-11	CARBON	100K	5%	1/4W	
R801	1-249-437-11	CARBON	47K	5%	1/4W	
R802	1-249-426-11	CARBON	5.6K	5%	1/4W	
R803	1-249-421-11	CARBON	2.2K	5%	1/4W	

Ref. No.	Part No.	Description				Remarks
R804	1-249-409-11	CARBON	220	5%	1/4W	
R805	1-249-409-11	CARBON	220	5%	1/4W	
		〈 VARIABLE RESISTOR 〉				
RV701	1-238-601-11	RES, ADJ, CARBON 22K				
		〈 SWITCH 〉				
S700	1-554-303-21	SWITCH, TACTILE (DISPLAY)				
S701	1-554-303-21	SWITCH, TACTILE (DIMMER)				
S702	1-554-303-21	SWITCH, TACTILE (-)				
S703	1-554-303-21	SWITCH, TACTILE (DEMO)				
S704	1-554-303-21	SWITCH, TACTILE (+)				
S705	1-554-303-21	SWITCH, TACTILE (EFFECT)				
S710	1-554-303-21	SWITCH, TACTILE (EFFECT MODE)				
S711	1-554-303-21	SWITCH, TACTILE (OFF)				
S712	1-554-303-21	SWITCH, TACTILE (◁)				
S713	1-554-303-21	SWITCH, TACTILE (▷)				
S714	1-554-303-21	SWITCH, TACTILE (△)				
S721	1-554-303-21	SWITCH, TACTILE (5)				
S722	1-554-303-21	SWITCH, TACTILE (▽)				
S730	1-554-303-21	SWITCH, TACTILE (CHARACTER EDIT)				
S731	1-554-303-21	SWITCH, TACTILE (4)				
S732	1-554-303-21	SWITCH, TACTILE (FLAT)				
S733	1-554-303-21	SWITCH, TACTILE (10)				
S734	1-554-303-21	SWITCH, TACTILE (5)				
S735	1-554-303-21	SWITCH, TACTILE (SUB MENU)				
S740	1-554-303-21	SWITCH, TACTILE (LINEAR)				
S741	1-554-303-21	SWITCH, TACTILE (3)				
S742	1-554-303-21	SWITCH, TACTILE (SLOPE)				
S743	1-554-303-21	SWITCH, TACTILE (9)				
S744	1-554-303-21	SWITCH, TACTILE (4)				
S745	1-554-303-21	SWITCH, TACTILE (MEMORY)				
S750	1-554-303-21	SWITCH, TACTILE (EXPAND)				
S751	1-554-303-21	SWITCH, TACTILE (2)				
S752	1-554-303-21	SWITCH, TACTILE (F3)				
S753	1-554-303-21	SWITCH, TACTILE (8)				
S754	1-554-303-21	SWITCH, TACTILE (3)				
S755	1-554-303-21	SWITCH, TACTILE (PERSONAL FILE)				
S760	1-554-303-21	SWITCH, TACTILE (COMPRESS)				
S761	1-554-303-21	SWITCH, TACTILE (1)				
S762	1-554-303-21	SWITCH, TACTILE (F2)				
S763	1-554-303-21	SWITCH, TACTILE (7)				

PANEL A

Ref. No.	Part No.	Description	Remarks
S764	1-554-303-21	SWITCH, TACTILE (2)	
S765	1-554-303-21	SWITCH, TACTILE (MORE 10)	
S770	1-554-303-21	SWITCH, TACTILE (CONTROL)	
S771	1-554-303-21	SWITCH, TACTILE (CONTROL)	
S772	1-554-303-21	SWITCH, TACTILE (F1)	
S773	1-554-303-21	SWITCH, TACTILE (6)	
S774	1-554-303-21	SWITCH, TACTILE (1)	
S775	1-554-303-21	SWITCH, TACTILE (SELECT 10)	
		〈 VIBRATOR 〉	
X701	1-577-364-11	VIBRATOR, CERAMIC 12MHz	
X702	1-579-175-11	VIBRATOR, CERAMIC 10MHz	
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		MISCELLANEOUS	
		**********	
5	1-575-216-11	WIRE, FLAT TYPE (9 CORE)	
CNJ101	⚠1-526-751-00	OUTLET, AC (UK)	
	⚠1-526-794-11	OUTLET, AC (AEP, Germany, Italian, Saudi Arabia)	
	1-526-882-00	OUTLET, AC (E)	
CNP1	⚠1-575-651-11	CORD, POWER (AEP, Germany, Italian)	
	⚠1-575-654-11	CORD, POWER (Saudi Arabia)	
	⚠1-575-656-11	CORD, POWER (E)	
	⚠1-575-669-21	CORD, POWER (UK)	
F101	⚠1-532-259-00	FUSE, TIME-LAG (AEP, UK, Germany, Italian) (1.5A)	
LCD901	1-809-202-11	DISPLAY PANEL, LIQUID CRYSTAL	
SV701	⚠1-570-046-21	SWITCH, VOLTAGE CHANGE (E, Saudi Arabia)	
T101	⚠1-450-596-11	TRANSFORMER, POWER (AEP, Germany, Italian)	
	⚠1-450-597-11	TRANSFORMER, POWER (UK)	
	⚠1-450-598-11	TRANSFORMER, POWER (E, Saudi Arabia)	
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Ref. No.	Part No.	Description	Remarks
		ACCESSORY & PACKING MATERIAL	
		**********	
	1-558-271-11	CORD, CONNECTION	(AEP, Germany, Italian)
	1-559-533-11	CORD, CONNECTION	(AEP, Germany, Italian)
	1-574-264-11	CORD, LIGHT PLUG	(AEP, Germany, Italian)
	3-701-630-00	BAG, POLYETHYLENE	(Germany, Italian)
	3-753-428-11	MANUAL, INSTRUCTION	(English, French, Spanish, Portuguese) (AEP)
	3-753-428-41	MANUAL, INSTRUCTION	(Germany, Dutch, Swedish, Italian) (AEP, Germany, Italian)
*	4-941-928-01	CUSHION (FRONT)	(UK, E, Saudi Arabia)
*	4-941-929-01	CUSHION (REAR)	(UK, E, Saudi Arabia)
*	4-944-163-01	CUSHION	(AEP, Germany, Italian)
*	4-946-091-01	INDIVIDUAL CARTON	(AEP, Germany, Italian)
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HARDWARE LIST

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# 1	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
# 2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.